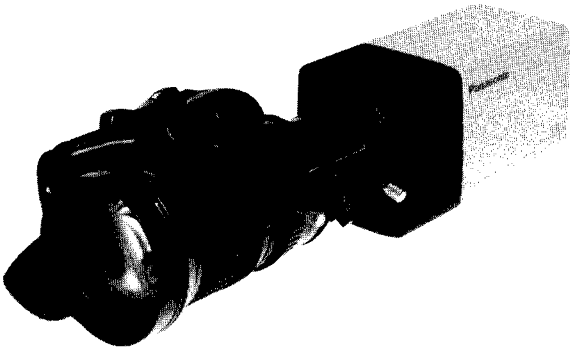
ORDER NO. AVS9404832C8

# Service Manual

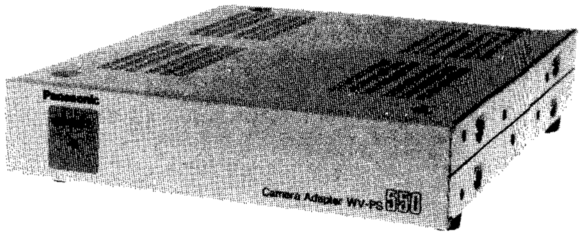
## Colour Video Camera WV-E550E

## Camera Adaptor WV-PS550



(Lens : Purchased locally)

**WV-E550E**



**WV-PS550**

## WV-E550E

## SPECIFICATIONS

| | |
|---|---|
| Pickup element | 1/2" interline, supersensitive CCD |
| Pixels | 752 (H) x 582 (V) pixels |
| Scanning | 2:1 interlace |
| System | PAL |
| Scanning fequency | 15.625 kHz (horizontal), 50 Hz (vertical) |
| Lens mout | 1/2" standard bayonet mount |
| Synchronizing | Internal or external |
| External sync input | VBS, BB, VS or HD/VD |
| Sensitivity | 2000 lux, F8, 3200 °K |
| Minimum illumination | 7 lux, at F1.4, +18 dB |
| Signal-to-noise ratio | 60 dB (typical) |
| Horizontal resolution | 800 TV lines (high band, DTL ON) |
| Registration | 0.05% |
| Contour correction | Horizontal and vertical (2 Line Type) |
| White balance | AWC (2 memories), MANU, ATW |
| Black balance | AUTO, Manual |
| Colour bar | full colour bar (Setup 0) |
| Encoder | Y, U, V |
| Shutter speed | 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, MANU (1/15000 to 1/62) |
| Gain | 0 dB, 9 dB, 18 dB, AGC |
| Gamma correction | ON/OFF switchtable |
| Storage mode | Field/frame switchable |
| Iris | AUTO, ELC |
| Video output | Composite: 1 Vp-p (75 Ω) x 1 (BNC connector) (VIDEO/RGB connector)<br>R/B/G: 0.7 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)<br>Y: 1 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)<br>C: 0.3Vp-p chroma level(75 Ω) x 1 (VIDEO/RGB connector)<br>PR: 0.7 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)<br>PB: 0.7 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)<br>Sync: 4 V/0.3 V (75 Ω) switchable x 1 (VIDEO/RGB connector) |

**Panasonic**

| | |
|---|---|
| Source voltage | 12 V DC |
| Power consumption | 12.0 W |
| Operating temperature | –10°C to +45°C (14°F to +113°F) |
| Storage temperature | –20°C to +60°C (4°F to +140°F) |
| Dimensions | 81 (W) x 86 (H) x 169 (D) mm [3-3/16" (W) x 3-3/8" (H) x 6-5/8" (D)] |
| Weight | 1.2 kg (2.64 lbs.) |

Weight and dimensions indicated are approximate.
Specifications are subject to change without notice.

## STANDARD ACCESSORIES

| | |
|---|---|
| Body cap | 1 |
| 4 pin connector for EXT DC IN | 1 |

## OPTIONAL ACCESSORIES

Multiplex Adaptor WV-PS550
Remote Control Unit (RCU) WV-RC700A
Remote Control Box (RCB) WV-CB700A
RCU Rack Mount Frame WV-Q70
Lens Extension Cable
  WV-CA12T12 (12-pin - 12-pin, approx. 15 cm/6")
Conversion Cable (for WV-CB700A)
  WV-CA20T10 (20-pin - 10-pin, approx. 1m/3.3ft)
Conversion Cable (for WV-RC700A)
  WV-CA26T20 (26-pin - 20-pin, approx. 3m/9.9ft)
Connection Cable (Dsub-Dsub)
  WV-CA9T9 (9-pin - 9-pin, approx. 5m/16.5ft)
Connection Cable (Dsub-BNC)
  WV-CA9T5 (9-pin - BNC, approx. 5m/16.5ft)
Studio Cable (for WV-RC700A)
  WV-CA26U15 (26-pin - 26-pin, approx. 15m/49.5ft)
  WV-CA26U30 (26-pin - 26-pin, approx. 30m/99ft)
  WV-CA26U100 (26-pin - 26-pin, approx. 100m/330ft)
Joint Connector WV-CA26T26 (26-pin - 26-pin)
RCB Cable (for WV-CB700A)
  WV-CA10B25 (10-pin - 10-pin, approx. 25m/32.5ft)
  WV-CA10B50 (10-pin - 10-pin, approx. 50m/165ft)
Mounting Bracket WV-831

## WV-PS550

## SPECIFICATIONS

| | |
|---|---|
| Power: | Input voltage 85 - 110V DC (supplied by the RCU WV-RC700A) |
| Input and Output: | |
| MPX Input and Output: | Frequency multiplex signal (N type connector x 1) |
| Data Input: | RS-232C, 2400 bps (4-pin connector x 1)<br>The Camera Adaptor WV-PS550, Camera WV-E550 and Remote Control Unit can not be controlled by RS-232C directly. |
| Audio Input: | –20 dB audio signal |
| Pan/Tilt and Housing Control Output: | Right, left, up and down, defroster and wiper<br>Open collector output (low active)<br>Sink current 20 mA max.<br>Withstand voltage 30V max. (28-pin connector x 1 each) |
| Switch Function: | Audio in/Data in Select Switch |
| Dimensions: | 206.5 (W) x 44 (H) x 250 (D) mm (8-1/8" (W) x 1-11/16" (H) x 9-1/2" (D)) |
| Weight: | 2.4 kg (5.28lbs.) |

Weight and dimensions indicated are approximate.
Specifications are subject to change without notice.

## STANDARD ACCESSORIES

| | |
|---|---|
| Camera Cable (36-pin/28-pin) | 1pc |
| 4-pin Connector for DATA IN | 1pc |
| N type Connector for MPX | 1pc |

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICEING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsuland voltage within the unit may have suificient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that impotant literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.

## IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "⚠" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be repleced with manufacture's specilied parts to prevent shock, fire, or other hazards.
Do not modify the original design without permission of manufacture.

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**WV-PS550**

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**Conductor View**

**WV-E550**

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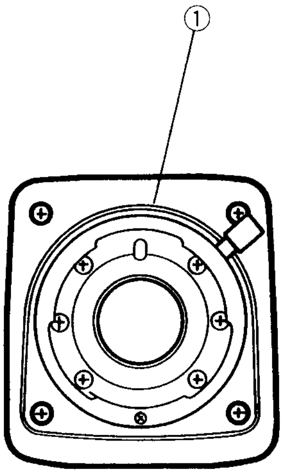
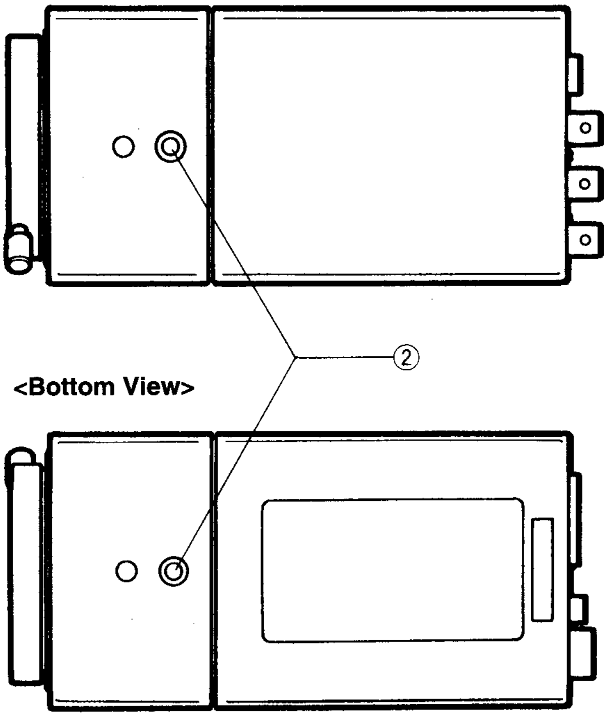
# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS (WV-E550E)

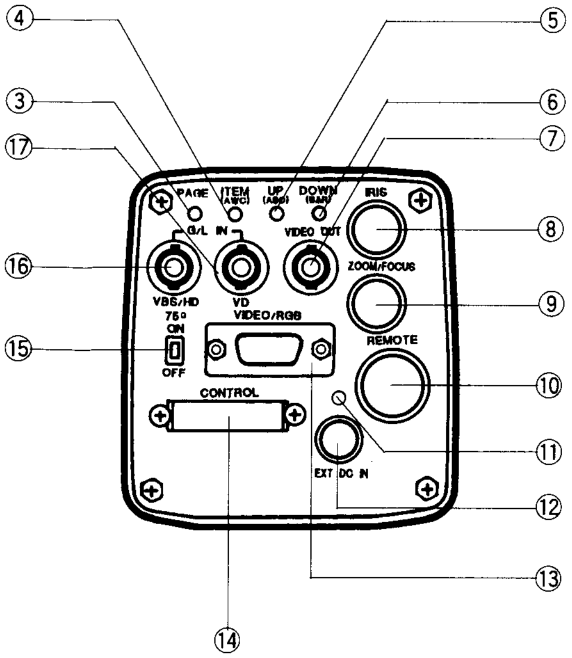


<Front View>

<Top View>



<Bottom View>


PAGE
ITEM (AWC)
UP (ABC)
DOWN (BAR)
IRIS
G/L IN
VIDEO OUT
ZOOM/FOCUS
VBS/HD
VD
75Ω ON
OFF
VIDEO/RGB
REMOTE
CONTROL
EXT DC IN
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰

1. **Lens Mount**
   1/2" standard bayonet type lens or a microscope adaptor can be mounted.

2. **Mounting Hole**
   A screw hole (1/4" - 20 UNC) for mounting the camera on a wall, ceiling with a mounting bracket or tripod.

3. **Page Switch (PAGE)**
   A menu will appear on the monitor screen when this switch is pressed for around 2 seconds. Pressing the switch advances the menu page.

4. **Item Switch (ITEM/AWC)**
   Any of the items shown in the menu can be selected with this switch. When the menu is not displayed or the camera is in shooting mode, the automatic white balance control can be set with this switch.

5. **Up Switch (UP/ABC)**
   While the menu is displayed, any setting can be brought up to a higher value with this switch. When the menu is not displayed or the camera is in shooting mode, the automatic black balance control canbe set with this switch.

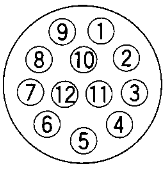
6. **Down Switch (DOWN/BAR)**
   While the menu is displayed any setting can be brought down to a lower value with this switch. When the menu is not displayed or the camera is in shooting mode, the colour bar and the shooting conditions are alternately indicated by pressing the switch.

**7. Video Output Connector (VIDEO OUT)**
A composite video signal is provided at this connector.

**8. Iris Connector (IRIS)**
Input terminal for lens with an iris control function. Some lenses may require an optional lens extension cable for connection.

| Pin No. | Signal | Pin No. | Signal |
|---|---|---|---|
| 1 | Not Used | 7 | Iris F |
| 2 | Not Used | 8 | Auto/Remote Control |
| 3 | GND | 9 | Not Used |
| 4 | Auto/Manual Control | 10 | Not Used |
| 5 | Iris Control | 11 | Not Used |
| 6 | Lens P | 12 | Not Used |

Iris Connector (IRIS)

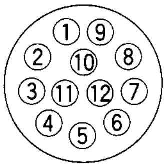


<Front View>

**9. Zoom/Focus Connector (ZOOM/FOCUS)**
Input terminal for lens with zoom and focus function that can be remote controlled.

| Pin No. | Signal | Pin No. | Signal |
|---|---|---|---|
| 1 | Not Used | 7 | Voltage Common |
| 2 | Not Used | 8 | Focus Control |
| 3 | GND | 9 | Zoom Control |
| 4 | Not Used | 10 | Not Used |
| 5 | Not Used | 11 | Lens +V |
| 6 | +12 V | 12 | Lens –V |

Zoom/Focus Connector (ZOOM/FOCUS)



<Front View>

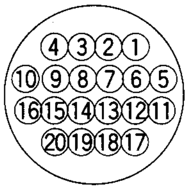
**10. Remote Connector (REMOTE)**
Input terminal dedicated to control signals from the optional Remote Control Box (WV-CB700A) and the Remote Control Unit (WV-RC700A).

* WV-CB700A is connected through the optional conversion cable (WV-CA20T10).

* WV-RC700A is connected through the optional conversion cable (WV-CA26T20).

| Pin No. | Signal | Pin No. | Signal |
|---|---|---|---|
| 1 | Composite Video Output | 11 | RCB Transmission |
| 2 | GND | 12 | Control (Command) |
| 3 | G/Y/Y Output | 13 | +9.2 V RCB |
| 4 | R/PR/C Output | 14 | DC 12 V Output |
| 5 | GND | 15 | DC 12 V Input |
| 6 | RCB Detect | 16 | DC 12 V Input |
| 7 | EXT SUB In | 17 | RCB Reception |
| 8 | B/PB Output | 18 | GND |
| 9 | GND | 19 | GND |
| 10 | G/L Input | 20 | Not used |

Remote Connector (REMOTE)



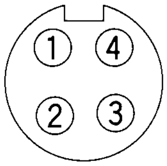
<Front View>

**11. Power Indicator**
Red LED lamp lights to indicate that the specified DC power is supplied to the camera.

**12. DC Input Connector (EXT DC IN)**
12 V DC is supplied through the 4-pin connector provided with the camera.

| Pin No. | Signal |
|---|---|
| 1 | +12 V In |
| 2 | +12 V In |
| 3 | Ground |
| 4 | Ground |

DC Input Connector (EXT DC IN)



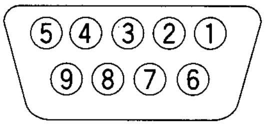
<Front View>

**13. Video/RGB Output Connector (VIDEO/RGB)**
Composite/Y signal, RGB/Y-C/component signal and synchronizing signal are output from this connector.

The optional cable WV-CA9T5 or WV-CA9T9 must be used for connection to this connector.

| Pin No. | Signal | Pin No. | Signal |
|---|---|---|---|
| 1 | GND | 6 | SY/COMP |
| 2 | GND | 7 | SYNC |
| 3 | R/PR/C | 8 | GND |
| 4 | G/Y/Y | 9 | C/NC |
| 5 | B/PB/NC | | |

Video/RGB Output Connector (VIDEO/RGB)

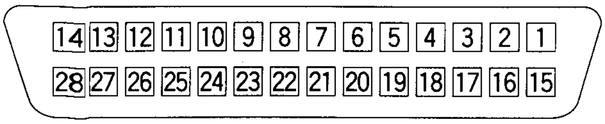


<Front View>

**14. Control Connector (CONTROL)**
Control signals for a pan/tilt unit come to this connector when a pan/tilt unit controller is connected to the camera through the Remote Control Unit WV-RC700A with a multicable.
The multiplex adaptor WV-PS550 is connected to this connector when using a coaxial multiplex system. The WV-RC700A and WV-PS550 can be connected with a coaxial cable.

| Pin No. | Signal | Pin No. | Signal |
|---|---|---|---|
| 1 | Composite Video Output | 15 | Defroster Control Output |
| 2 | GND | 16 | Wiper Control Output |
| 3 | Not Used | 17 | Common |
| 4 | Not Used | 18 | +5.2 V Output |
| 5 | G/L Input | 19 | GND |
| 6 | GND | 20 | −5.2 V Output |
| 7 | WV-PS550 Detect | 21 | GND |
| 8 | PS Transmission | 22 | GND |
| 9 | PS Reception | 23 | DC 12 V Input |
| 10 | GND | 24 | DC 12 V Input |
| 11 | UP Control Output | 25 | Not Used |
| 12 | Down Control Output | 26 | +9.2 V Output |
| 13 | Left Control Output | 27 | GND |
| 14 | Right Control Output | 28 | GND |

Control Connector (CONTROL)



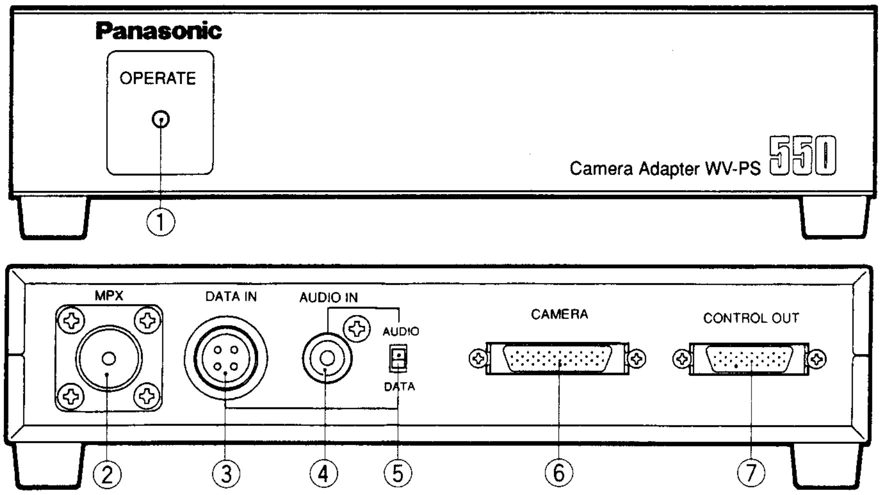
<Front View>

**15. G/L Signal 75-ohm ON/OFF Switch (75Ω ON/OFF)**
A terminating switch for G/L signals at G/L VBS/HD input connector and G/L VD input connector.

**16. G/L VBS/HD Input Connector (G/L IN - VBS/HD)**
Signals synchronized with the reference signal are to be supplied to this connector when the camera is to be synchronized with the reference signal. VBS/BB, VS and HD signals are to be automatically determined.

**17. G/L VD Input Connector (G/L IN - VD)**
Same as Item (16) except that VD signal is to be supplied when input signal at Item (16) is HD.

# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS (WV-PS550)



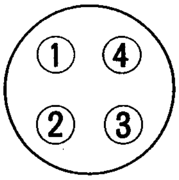
**(1) Power LED (OPERATE)**
When the Remote Control Unit (RCU) WV-RC700A and Camera WV-E550 are properly connected and also when the power from the Remote Control Unit is supplied, this LED lights.

**(2) MPX Input/Output Connector (MPX)**
This connector is used to connect the coaxial cable from the MPX connector of the Remote Control Unit (RCU) WV-RC700A.

**(3) Data Input Connector (DATA IN, 4-pin)**
This connector is used to connect the RS-232C (baud rate 2400 bps) control signal from the pan/tilt and lens controller.

**Caution:**
When connecting the controller to this connector, do not connect anything to the Audio Input Jack (4). Also, be sure to switch the Audio In/Data In Select Switch (5) is set to the DATA IN position.

| Pin No. | Signal |
|---|---|
| 1 | NC |
| 2 | GND |
| 3 - | RXD |
| 4 | TXD |



**(4) Audio Input Jack (AUDIO IN)**
This jack is used to supply an audio signal for output to the audio output of the Remote Control Unit (RCU) WV-RC700A.

**Caution:**
When supplying an audio signal to the remote control unit using this jack, nothing should be connected to the Data Input Connector (3) and Audio In/Data In Select Switch (5) should be switched over to the AUDIO position.
Also, be sure to switch the select switch on the MOD PCB board of the Remote Control Unit (RCU) WV-RC700A to the AUDIO position.

**(5) Audio In/Data In Select Switch (AUDIO IN/DATA IN)**
This switch is used to select the Data Input Connector (3) and the Audio Input Jack (4).

**AUDIO IN:** Audio signal supplied to WV-RC700A is selected.

**DATA IN:** Data signal supplied from the controller is selected.

**(6) Camera Cable Connector (CAMERA 36-pin)**
This connector is used to connect the 36-pin side of the supplied 28-pin/36-pin cable.
(The 28-pin side of the cable should be connected to the Colour Camera WV-E550.)

**(7) Control Output Connector (CONTROL OUT, 28-pin)**
This connector is used to connect the cable for controlling the pan/tilt unit.

| Pin No. | Signal |
|---|---|
| 11 | UP |
| 12 | DOWN |
| 13 | LEFT |
| 14 | RIGHT |
| 15 | DEF |
| 16 | WIPE |
| 17 | COM (0V) |
| 19, 27, 28 | GND |
| Others | NC |

* **Control signal Interface**

| | |
|---|---|
| Control system: | ON/OFF |
| Polarity: | Low active |
| Output: | Open collector |

(transistor withstand voltage: 30V max.)

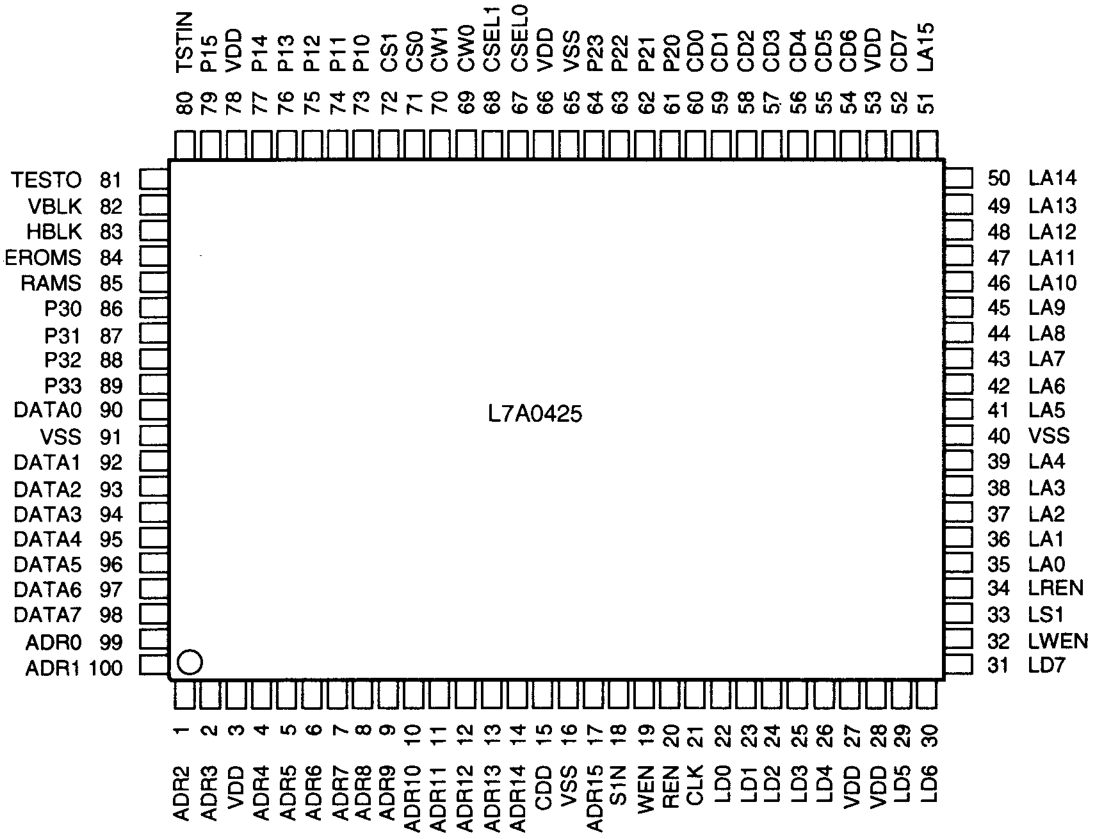
| | |
|---|---|
| Sink current: | 20 mA max. |

* **Caution:**
When driving the pan/tilt head, relay, etc. directly, care should be taken to prevent the power from going up beyond the withstand voltage of the adaptor output circuit and the sink current (20 mA max.).

# CIRCUIT DESCRIPTION

## IC Description (WV-E550E)

**1.** IC1 on the System Control Board is using the Microprocessor I/O Expander Gate Array Logic IC YWL7A0425. Description of this IC is as follows:


L7A0425
80 TSTIN
79 P15
78 VDD
77 P14
76 P13
75 P12
74 P11
73 P10
72 CS1
71 CS0
70 CW1
69 CW0
68 CSEL1
67 CSEL0
66 VDD
65 VSS
64 P23
63 P22
62 P21
61 P20
60 CD0
59 CD1
58 CD2
57 CD3
56 CD4
55 CD5
54 CD6
53 VDD
52 CD7
51 LA15
TESTO 81
VBLK 82
HBLK 83
EROMS 84
RAMS 85
P30 86
P31 87
P32 88
P33 89
DATA0 90
VSS 91
DATA1 92
DATA2 93
DATA3 94
DATA4 95
DATA5 96
DATA6 97
DATA7 98
ADR0 99
ADR1 100
50 LA14
49 LA13
48 LA12
47 LA11
46 LA10
45 LA9
44 LA8
43 LA7
42 LA6
41 LA5
40 VSS
39 LA4
38 LA3
37 LA2
36 LA1
35 LA0
34 LREN
33 LS1
32 LWEN
31 LD7
1 ADR2
2 ADR3
3 VDD
4 ADR4
5 ADR5
6 ADR6
7 ADR7
8 ADR8
9 ADR9
10 ADR10
11 ADR11
12 ADR12
13 ADR13
14 ADR14
15 CDD
16 VSS
17 ADR15
18 S1N
19 WEN
20 REN
21 CLK
22 LD0
23 LD1
24 LD2
25 LD3
26 LD4
27 VDD
28 VDD
29 LD5
30 LD6

(TOP VIEW)

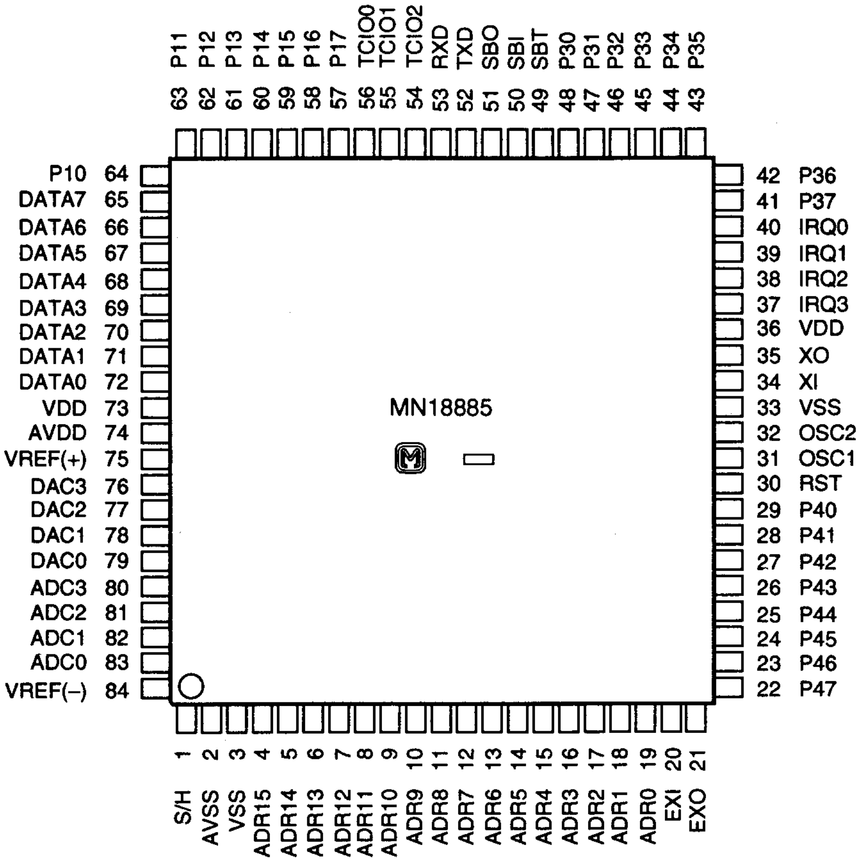
| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | ADR2 | I | Address input terminals from Microprocessor. (16-Bit) |
| 2 | ADR3 | I | |
| 3 | VDD | – | Power supply terminal. |
| 4 | ADR4 | I | Address input terminals from Microprocessor. (16-Bit) |
| 5 | ADR5 | I | |
| 6 | ADR6 | I | |
| 7 | ADR7 | I | |
| 8 | ADR8 | I | |
| 9 | ADR9 | I | |
| 10 | ADR10 | I | |
| 11 | ADR11 | I | |
| 12 | ADR12 | I | |
| 13 | ADR13 | I | |
| 14 | ADR14 | I | |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 15 | VDD | – | Power supply terminal. |
| 16 | VSS | – | Ground terminal. |
| 17 | ADR15 | I | Address (MSB) input terminal from Microprocessor. |
| 18 | S1N | I | S1N signal input terminal. |
| 19 | WEN | I | Write enable signal input terminal. |
| 20 | REN | I | Read enable signal input terminal. |
| 21 | CLK | I | Clock pulse input terminal. |
| 22 | LD0 | I/O | (LSB)<br>Data input/output terminals between Digital Board. |
| 23 | LD1 | I/O | |
| 24 | LD2 | I/O | |
| 25 | LD3 | I/O | |
| 26 | LD4 | I/O | |
| 27 | VDD | – | Power supply terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 28 | VDD | – | Power supply terminal. |
| 29 | LD5 | I/O | Data input/output terminals between Digital Board. |
| 30 | LD6 | I/O | |
| 31 | LD7 | I/O | (MSB) |
| 32 | LWEN | I | Write enable signal input terminal. |
| 33 | LS1 | I | LS1 signal input terminal. |
| 34 | LREN | I | Read enable signal input terminal. |
| 35 | LA0 | O | (LSB)<br>Address output terminals for Digital Board. (16-Bit) |
| 36 | LA1 | O | |
| 37 | LA2 | O | |
| 38 | LA3 | O | |
| 39 | LA4 | O | |
| 40 | VSS | – | Ground terminal. |
| 41 | LA5 | O | Address output terminals for Digital Board. (16-Bit) |
| 42 | LA6 | O | |
| 43 | LA7 | O | |
| 44 | LA8 | O | |
| 45 | LA9 | O | |
| 46 | LA10 | O | |
| 47 | LA11 | O | |
| 48 | LA12 | O | |
| 49 | LA13 | O | |
| 50 | LA14 | O | |
| 51 | LA15 | O | (MSB) |
| 52 | CD7 | O | DOWN SW signal output terminal. |
| 53 | VDD | – | Power supply terminal. |
| 54 | CD6 | O | UP SW signal output terminal. |
| 55 | CD5 | O | LEFT SW signal output terminal. |
| 56 | CD4 | O | RIGHT SW signal output terminal. |
| 57 | CD3 | O | FAR SW signal output terminal. |
| 58 | CD2 | O | NEAR SW signal output terminal. |
| 59 | CD1 | O | WIDE SW signal output terminal. |
| 60 | CD0 | O | TELE SW signal output terminal. |
| 61 | P20 | I | P20 signal input terminal. |
| 62 | P21 | I | Clock Data input terminal. |
| 63 | P22 | – | Test point terminal. |
| 64 | P23 | – | Test point terminal. |
| 65 | VSS | – | Ground terminal. |
| 66 | VDD | – | Power supply terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 67 | CSEL0 | O | Chip Select 0 signal output terminal. |
| 68 | CSEL1 | O | Chip Select 1 signal output terminal. |
| 69 | CW0 | I | CW0 signal input terminal. |
| 70 | CW1 | I | CW1 signal input terminal. |
| 71 | CS0 | I | CS0 signal input terminal. |
| 72 | CS1 | I | CS1 signal input terminal. |
| 73 | P10 | O | SC CRS2 signal output terminal. |
| 74 | P11 | O | SC CRS2 signal output terminal. |
| 75 | P12 | O | DEF SW signal output terminal. |
| 76 | P13 | O | WIPE SW signal output terminal. |
| 77 | P14 | O | P14 signal output terminal. |
| 78 | VDD | – | Power supply terminal. |
| 79 | P15 | O | P15 signal output terminal. |
| 80 | TSTIN | I | Test signal input terminal. |
| 81 | TESTO | O | Test signal output terminal. |
| 82 | VBLK | I | VBLK signal input terminal. |
| 83 | HBLK | I | HBLK signal input terminal. |
| 84 | EROMS | O | EROMS signal output terminal. |
| 85 | RAMS | O | RAMS signal output terminal. |
| 86 | P30 | O | OE signal output terminal. |
| 87 | P31 | O | CCLK Pulse output terminal. |
| 88 | P32 | O | P32 signal output terminal. |
| 89 | P33 | O | P33 signal output terminal. |
| 90 | DATA0 | I/O | DATA (LSB) input/output terminal between Microprocessor. (8-Bit) |
| 91 | VSS | – | Ground terminal. |
| 92 | DATA1 | I/O | DATA input/out terminals between Microprocessor. (8-Bit) |
| 93 | DATA2 | I/O | |
| 94 | DATA3 | I/O | |
| 95 | DATA4 | I/O | |
| 96 | DATA5 | I/O | |
| 97 | DATA6 | I/O | |
| 98 | DATA7 | I/O | (MSB) |
| 99 | ADR0 | I | (LSB)<br>Address input terminals from Microprocessor. (16-Bit) |
| 100 | ADR1 | I | |

**2.** IC2 on the System Control Board is using the Microprocessor IC MN18885.
Description of this IC is as follows:

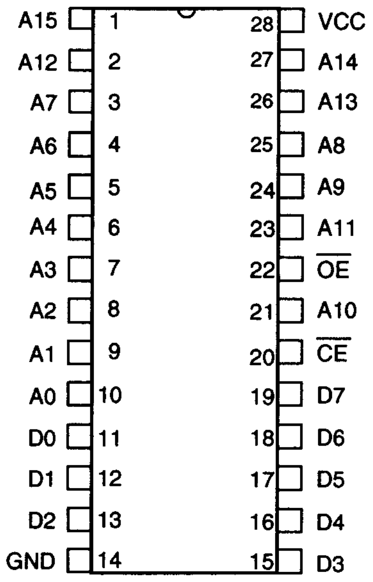

P11 63
P12 62
P13 61
P14 60
P15 59
P16 58
P17 57
TCIO0 56
TCIO1 55
TCIO2 54
RXD 53
TXD 52
SBO 51
SBI 50
SBT 49
P30 48
P31 47
P32 46
P33 45
P34 44
P35 43
P10 64
DATA7 65
DATA6 66
DATA5 67
DATA4 68
DATA3 69
DATA2 70
DATA1 71
DATA0 72
VDD 73
AVDD 74
VREF(+) 75
DAC3 76
DAC2 77
DAC1 78
DAC0 79
ADC3 80
ADC2 81
ADC1 82
ADC0 83
VREF(–) 84
MN18885
42 P36
41 P37
40 IRQ0
39 IRQ1
38 IRQ2
37 IRQ3
36 VDD
35 XO
34 XI
33 VSS
32 OSC2
31 OSC1
30 RST
29 P40
28 P41
27 P42
26 P43
25 P44
24 P45
23 P46
22 P47
1 S/H
2 AVSS
3 VSS
4 ADR15
5 ADR14
6 ADR13
7 ADR12
8 ADR11
9 ADR10
10 ADR9
11 ADR8
12 ADR7
13 ADR6
14 ADR5
15 ADR4
16 ADR3
17 ADR2
18 ADR1
19 ADR0
20 EXI
21 EXO

**(TOP VIEW)**

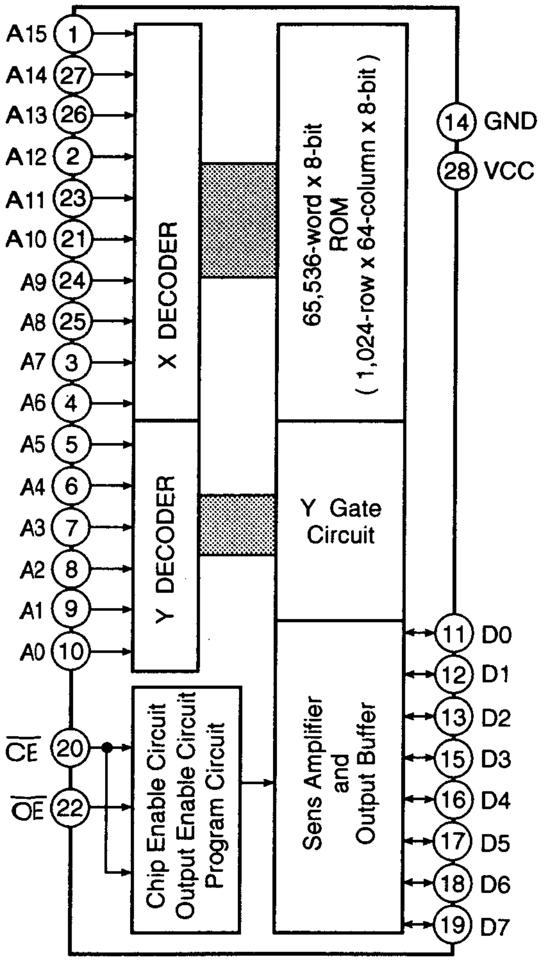
| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | S/H | I/O | S/H signal input/output terminal. |
| 2 | AVSS | – | Ground terminal. |
| 3 | VSS | – | Ground terminal. |
| 4 | ADR15 | O | (MSB)<br>Address output terminals for Microprocessor I/O Expander IC. (16-Bit) |
| 5 | ADR14 | O | |
| 6 | ADR13 | O | |
| 7 | ADR12 | O | |
| 8 | ADR11 | O | |
| 9 | ADR10 | O | |
| 10 | ADR9 | O | |
| 11 | ADR8 | O | |
| 12 | ADR7 | O | |
| 13 | ADR6 | O | Address output terminals for Microprocessor I/O Expander IC. (16-Bit) |
| 14 | ADR5 | O | |
| 15 | ADR4 | O | |
| 16 | ADR3 | O | |
| 17 | ADR2 | O | |
| 18 | ADR1 | O | |
| 19 | ADR0 | O | (LSB) |
| 20 | EXI | I | EXI signal input terminal. |
| 21 | EXO | O | EXO signal output terminal. |
| 22 | P47 | O | Read enable signal output terminal. |
| 23 | P46 | O | Write enable signal output terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 24 | P45 | O | P45 signal output terminal. |
| 25 | P44 | O | P44 signal output terminal. |
| 26 | P43 | O | P43 signal output terminal. |
| 27 | P42 | O | P42 signal output terminal. |
| 28 | P41 | O | S1N signal output terminal. |
| 29 | P40 | O | S0N signal output terminal. |
| 30 | RST | I | Reset signal input terminal. |
| 31 | OSC1 | I | Oscillator input terminal. |
| 32 | OSC2 | O | Oscillator output terminal. |
| 33 | VSS | – | Ground terminal. |
| 34 | XI | I | XI signal input terminal. |
| 35 | XO | O | XO signal output terminal. |
| 36 | VDD | – | Power supply terminal. |
| 37 | IRQ3 | I | IRQ3 signal input terminal. |
| 38 | IRQ2 | I | Power off signal input terminal. |
| 39 | IRQ1 | I | VD signal input terminal. |
| 40 | IRQ0 | I | LMW signal input terminal. |
| 41 | P37 | O | STB signal output terminal. |
| 42 | P36 | O | LD signal output terminal. |
| 43 | P35 | O | SEL3 signal output terminal. |
| 44 | P34 | O | SEL2 signal output terminal. |
| 45 | P33 | O | SEL1 signal output terminal. |
| 46 | P32 | O | P32 signal output terminal. |
| 47 | P31 | O | SYNCSW signal output terminal. |
| 48 | P30 | O | SHUTTA signal output terminal. |
| 49 | SBT | O | SBT signal output terminal. |
| 50 | SBI | I | SBI signal input terminal. |
| 51 | SBO | O | YOUT3 signal output terminal. |
| 52 | TXD | O | TXD signal output terminal. |
| 53 | RXD | I | RXD signal input terminal. |
| 54 | TCIO2 | I | BUSY signal input terminal. |
| 55 | TCIO1 | I | Data Input Switch terminal. |
| 56 | TCIO0 | I | WHD signal input terminal. |
| 57 | P17 | O | VDRST signal output terminal. |
| 58 | P16 | O | FLD/FRM signal output terminal. |
| 59 | P15 | O | GAMMA SW signal output terminal. |
| 60 | P14 | O | IRIS-R/A signal output terminal. |
| 61 | P13 | O | P13 signal output terminal. |
| 62 | P12 | O | P12 signal output terminal. |
| 63 | P11 | O | P11 signal output terminal. |
| 64 | P10 | O | AWCCNT signal output terminal. |
| 65 | DATA7 | I/O | (MSB)<br>Data input/output terminals between Microprocessor I/O Expander IC. (8-Bit) |
| 66 | DATA6 | I/O | |
| 67 | DATA5 | I/O | |
| 68 | DATA4 | I/O | |
| 69 | DATA3 | I/O | |
| 70 | DATA2 | I/O | |
| 71 | DATA1 | I/O | |
| 72 | DATA0 | I/O | (LSB) |
| 73 | VDD | – | Power supply terminal. |
| 74 | AVDD | – | Power supply terminal. |
| 75 | VREF(+) | I | Reference Voltage (+) input terminal. |
| 76 | DAC3 | O | D/A Converter 3 output terminal. |
| 77 | DAC2 | O | D/A Converter 2 output terminal. |
| 78 | DAC1 | O | D/A Converter 1 output terminal. |
| 79 | DAC0 | O | D/A Converter 0 output terminal. |
| 80 | ADC3 | I | A/D Converter 3 input terminal. |
| 81 | ADC2 | I | A/D Converter 2 input terminal. |
| 82 | ADC1 | I | A/D Converter 1 input terminal. |
| 83 | ADC0 | I | A/D Converter 0 input terminal. |
| 84 | VREF(–) | I | Reference Voltage (–) input terminal. |

**3.** IC3 on the System Control Board is using the One-time Programmable ROM IC YWM27C512F51.
Description of this IC is as follows:

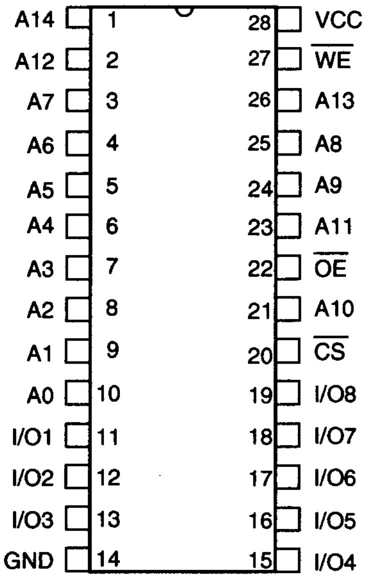

A15 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
D0 11
D1 12
D2 13
GND 14
28 VCC
27 A14
26 A13
25 A8
24 A9
23 A11
22 OE
21 A10
20 CE
19 D7
18 D6
17 D5
16 D4
15 D3

**(TOP VIEW)**

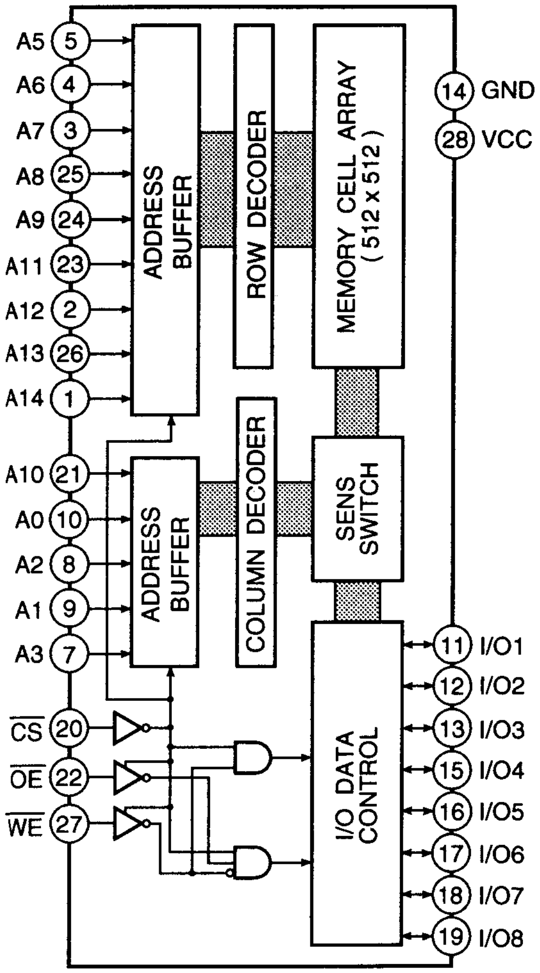

A15 1
A14 27
A13 26
A12 2
A11 23
A10 21
A9 24
A8 25
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
CE 20
OE 22
X DECODER
Y DECODER
Chip Enable Circuit
Output Enable Circuit
Program Circuit
65,536-word x 8-bit
ROM
( 1,024-row x 64-column x 8-bit )
Y Gate Circuit
Sens Amplifier
and
Output Buffer
14 GND
28 VCC
11 D0
12 D1
13 D2
15 D3
16 D4
17 D5
18 D6
19 D7

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | A15 | I | (MSB) |
| 2 | A12 | I | |
| 3 | A7 | I | |
| 4 | A6 | I | |
| 5 | A5 | I | Address input terminals.<br>(16-Bit) |
| 6 | A4 | I | |
| 7 | A3 | I | |
| 8 | A2 | I | |
| 9 | A1 | I | |
| 10 | A0 | I | (LSB) |
| 11 | D0 | I/O | (LSB) |
| 12 | D1 | I/O | Data input/output<br>terminals. (8-Bit) |
| 13 | D1 | I/O | |
| 14 | GND | – | Ground terminal. |
| 15 | D1 | I/O | |
| 16 | D1 | I/O | |
| 17 | D1 | I/O | Data input/output<br>terminals. (8-Bit) |
| 18 | D1 | I/O | |
| 19 | D1 | I/O | (MSB) |
| 20 | $\overline{\text{CE}}$ | I | Chip enable signal input terminal. |
| 21 | A10 | I | Address input terminals.<br>(16-Bit) |
| 22 | $\overline{\text{OE}}$ | I | Output enable signal input terminal. |
| 23 | A11 | I | |
| 24 | A9 | I | Address input terminals.<br>(16-Bit) |
| 25 | A8 | I | |
| 26 | A13 | I | |
| 27 | A14 | I | |
| 28 | VCC | – | Power supply terminal. |

**4.** IC4 on the System Control Board is using the Static RAM IC YW43256AGU10L.
Description of this IC is as follows:


A14 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
I/O1 11
I/O2 12
I/O3 13
GND 14
28 VCC
27 WE
26 A13
25 A8
24 A9
23 A11
22 OE
21 A10
20 CS
19 I/O8
18 I/O7
17 I/O6
16 I/O5
15 I/O4

**(TOP VIEW)**

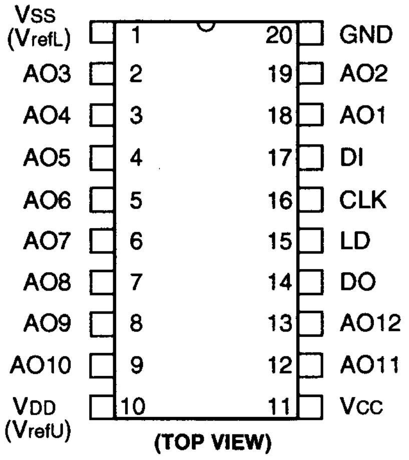

A5 5
A6 4
A7 3
A8 25
A9 24
A11 23
A12 2
A13 26
A14 1
A10 21
A0 10
A2 8
A1 9
A3 7
CS 20
OE 22
WE 27
ADDRESS BUFFER
ROW DECODER
MEMORY CELL ARRAY (512 x 512)
ADDRESS BUFFER
COLUMN DECODER
SENS SWITCH
I/O DATA CONTROL
14 GND
28 VCC
11 I/O1
12 I/O2
13 I/O3
15 I/O4
16 I/O5
17 I/O6
18 I/O7
19 I/O8

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | A14 | I | (MSB)<br>Address input terminals. (15-Bit) |
| 2 | A12 | I | |
| 3 | A7 | I | |
| 4 | A6 | I | |
| 5 | A5 | I | |
| 6 | A4 | I | |
| 7 | A3 | I | |
| 8 | A2 | I | |
| 9 | A1 | I | |
| 10 | A0 | I | (LSB) |
| 11 | I/O1 | I/O | (LSB)<br>Data input/output terminals. (8-Bit) |
| 12 | I/O2 | I/O | |
| 13 | I/O3 | I/O | |
| 14 | GND | – | Ground terminal. |
| 15 | I/O4 | I/O | Data input/output terminals. (8-Bit) |
| 16 | I/O5 | I/O | |
| 17 | I/O6 | I/O | |
| 18 | I/O7 | I/O | |
| 19 | I/O8 | I/O | (MSB) |
| 20 | $\overline{CS}$ | I | Chip Select signal input terminal. |
| 21 | A10 | I | Address input terminals. (15-Bit) |
| 22 | $\overline{OE}$ | I | Output enable signal input terminal. |
| 23 | A11 | I | Address input terminals. (15-Bit) |
| 24 | A9 | I | |
| 25 | A8 | I | |
| 26 | A13 | I | |
| 27 | $\overline{WE}$ | I | Write enable signal input terminal. |
| 28 | VCC | – | Power supply terminal. |

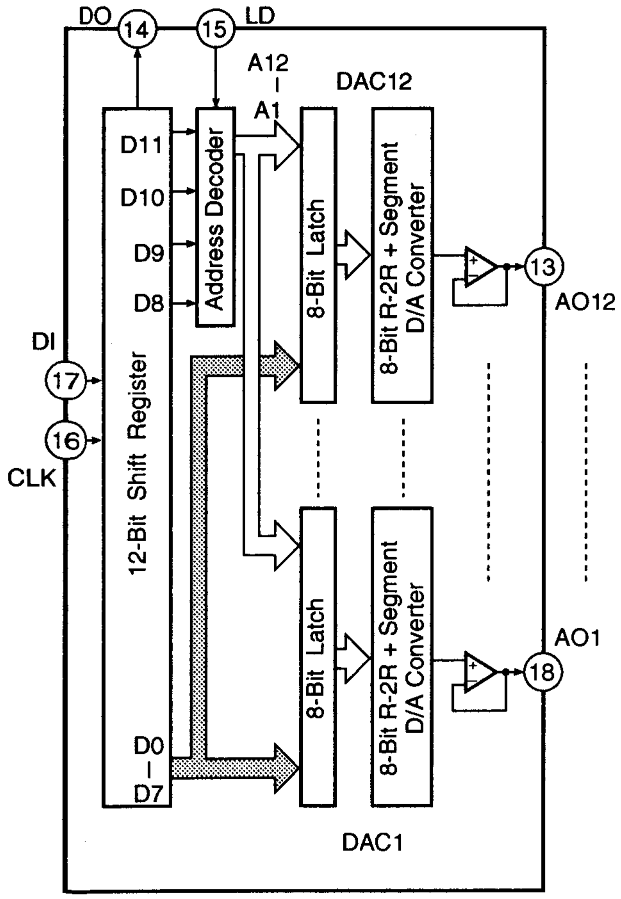
| $\overline{CS}$ | $\overline{OE}$ | $\overline{WE}$ | MODE | FUNCTION |
|---|---|---|---|---|
| H | * | * | No Selection | High Impedance |
| L | H | H | Output disable | High Impedance |
| L | L | H | Read | Dout |
| L | * | L | Write | Din |

* : Don't care

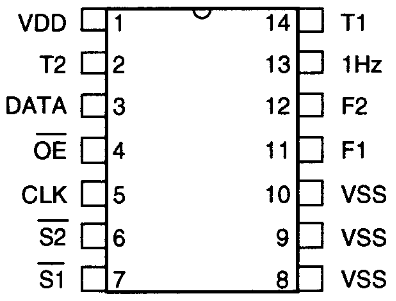
**5.** IC12 on the System Control Board is using the 12-ch D/A Converter IC YWM62352GP.
Description of this IC is as follows:


Vss (VrefL) 1
AO3 2
AO4 3
AO5 4
AO6 5
AO7 6
AO8 7
AO9 8
AO10 9
VDD (VrefU) 10
20 GND
19 AO2
18 AO1
17 DI
16 CLK
15 LD
14 DO
13 AO12
12 AO11
11 Vcc
(TOP VIEW)

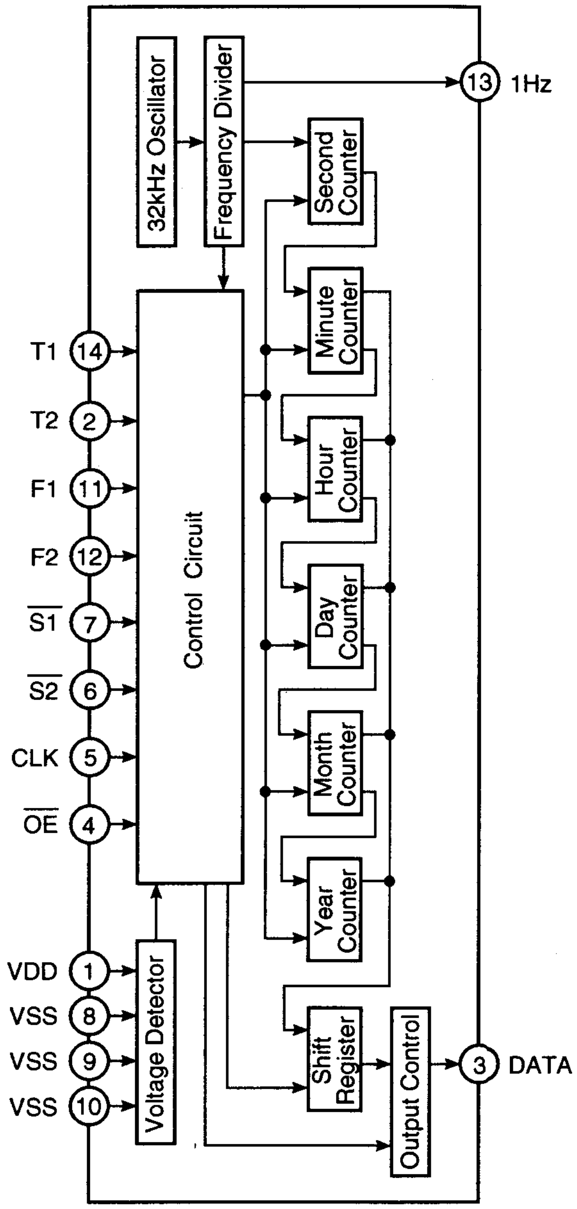
| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | Vss (VrefL) | – | Lower reference voltage supply terminal for D/A Converter circuit. |
| 2 | AO3 | O | Analog Data 3 output terminal. |
| 3 | AO4 | O | Analog Data 4 output terminal. |
| 4 | AO5 | O | Analog Data 5 output terminal. |
| 5 | AO6 | O | Analog Data 6 output terminal. |
| 6 | AO7 | O | Analog Data 7 output terminal. |
| 7 | AO8 | O | Analog Data 8 output terminal. |
| 8 | AO9 | O | Analog Data 9 output terminal. |
| 9 | AO10 | O | Analog Data 10 output terminal. |
| 10 | VDD (VrefU) | – | Upper reference voltage supply terminal for D/A Converter circuit. |
| 11 | Vcc | – | Power supply terminal terminal. |
| 12 | AO11 | O | Analog Data 11 output terminal. |
| 13 | AO12 | O | Analog Data 12 output terminal. |
| 14 | DO | O | MSB Data output terminal from 12-Bit Shift Register. |
| 15 | LD | I | Load signal input terminal.<br>Data of 12-Bit Shift Register should be loaded to Decoder and D/A Output Registers when LD = H. |
| 16 | CLK | I | Shift Clock input terminal.<br>Serial Data from DI terminal should be input to Decoder and 12-Bit Shift Register at raising edge of this signal. |
| 17 | DI | I | 12-Bit Serial Data input terminal. |
| 18 | AO1 | O | Analog Data 1 output terminal. |
| 19 | AO2 | O | Analog Data 2 output terminal. |
| 20 | GND | – | Ground terminal. |


DO
14
15
LD
A12
A1
DAC12
D11
D10
D9
D8
Address Decoder
8-Bit Latch
8-Bit R-2R + Segment D/A Converter
13
AO12
DI
17
16
CLK
12-Bit Shift Register
8-Bit Latch
8-Bit R-2R + Segment D/A Converter
AO1
18
D0
D7
DAC1

**6.** IC18 on the System Control Board is using the Real-time Clock IC YWRTC450315B.
Description of this IC is as follows:

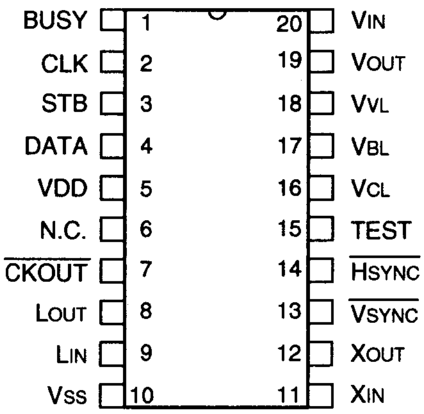

VDD 1
T2 2
DATA 3
OE 4
CLK 5
S2 6
S1 7
14 T1
13 1Hz
12 F2
11 F1
10 VSS
9 VSS
8 VSS

(TOP VIEW)


32kHz Oscillator
Frequency Divider
13 1Hz
Second Counter
Minute Counter
Hour Counter
Day Counter
Month Counter
Year Counter
Shift Register
Output Control
Control Circuit
Voltage Detector
T1 14
T2 2
F1 11
F2 12
S1 7
S2 6
CLK 5
OE 4
VDD 1
VSS 8
VSS 9
VSS 10
3 DATA

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | VDD | – | Power supply terminal.<br>Normally 1.5V. |
| 2 | T2 | I | Test terminal 2.<br>Normally connect at VSS. |
| 3 | DATA | O | Data outpuput terminal.<br>Data should be output when $\overline{OE}$ terminal is at “L”. |
| 4 | OE | I | Output enable signal input terminal. |
| 5 | CLK | I | Clock Pulse input terminal. |
| 6 | $\overline{S2}$ | I | $\overline{S2}$ signal input terminal.<br>Active at “L”. |
| 7 | $\overline{S1}$ | I | $\overline{S1}$ signal input terminal.<br>Active at “L”. |
| 8 | VSS | – | Ground terminal. |
| 9 | VSS | – | Ground terminal. |
| 10 | VSS | – | Ground terminal. |
| 11 | F1 | I | F1 signal input terminal. |
| 12 | F2 | I | F2 signal input terminal. |
| 13 | 1Hz | O | 1Hz Pulse output terminal.<br>50% duty cycle. |
| 14 | T1 | I | Test terminal 1.<br>Normally connect at VSS. |

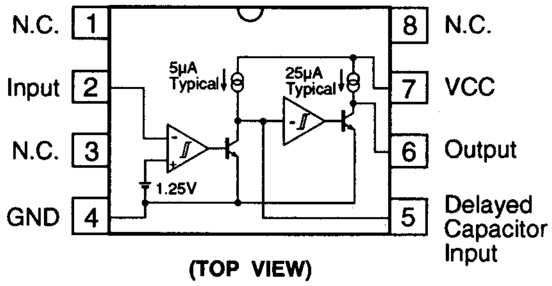
**7.** IC17 on the System Control Board is using the On-screen Display IC YWUPD6450601.
Description of this IC is as follows:


BUSY
CLK
STB
DATA
VDD
N.C.
$\overline{\text{CKOUT}}$
LOUT
LIN
Vss
1
2
3
4
5
6
7
8
9
10
20
19
18
17
16
15
14
13
12
11
VIN
VOUT
VVL
VBL
VCL
TEST
$\overline{\text{HSYNC}}$
$\overline{\text{VSYNC}}$
XOUT
XIN

(TOP VIEW)

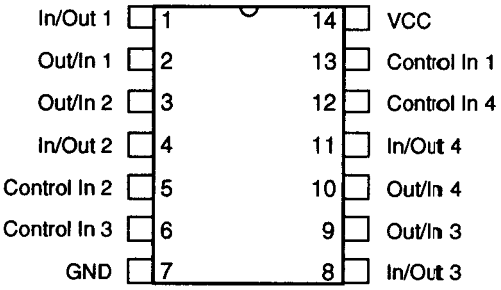
| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | BUSY | O | Busy signal output terminal. |
| 2 | CLK | I | Serial Clock input terminal. |
| 3 | STB | I | Strobe signal input terminal. |
| 4 | DATA | I | Serial Data input terminal. |
| 5 | VDD | – | Power supply terminal. |
| 6 | N.C. | – | Non connection. |
| 7 | $\overline{\text{CKOUT}}$ | O | Clock Pulse output terminal for Oscillation frequency check. |
| 8 | LOUT | O | LC Oscillator output terminal. |
| 9 | LIN | I | LC Oscillator input terminal. |
| 10 | VSS | – | Ground terminal. |
| 11 | XIN | I | Crystal Oscillator input terminal. |
| 12 | XOUT | O | Crystal Oscillator output terminal. |
| 13 | $\overline{\text{VSYNC}}$ | I | Vertical Sync signal input terminal. |
| 14 | $\overline{\text{HSYNC}}$ | I | Horizontal Sync signal input terminal. |
| 15 | TEST | – | Test terminal. |
| 16 | VCL | I | VCL signal input terminal. |
| 17 | VBL | I | VBL signal input terminal. |
| 18 | VVL | I | VVL signal input terminal. |
| 19 | VOUT | O | Video signal output terminal. |
| 20 | VIN | I | Video signal input terminal. |

**8.** IC10 and IC15 on the System Control Board are using the Voltage Detector IC YWM51957AFP.
Description of this IC is as follows:


N.C.
1
Input
2
N.C.
3
GND
4
8
N.C.
7
VCC
6
Output
5
Delayed Capacitor Input
5μA Typical
25μA Typical
1.25V

(TOP VIEW)

**9.** IC18 on the System Control Board, IC3 and IC4 on the Mother Board are using the Quad Analog Switches/Multiplexers/Demultiplexers IC UPD4066 BG.
Description of this IC is as follows:

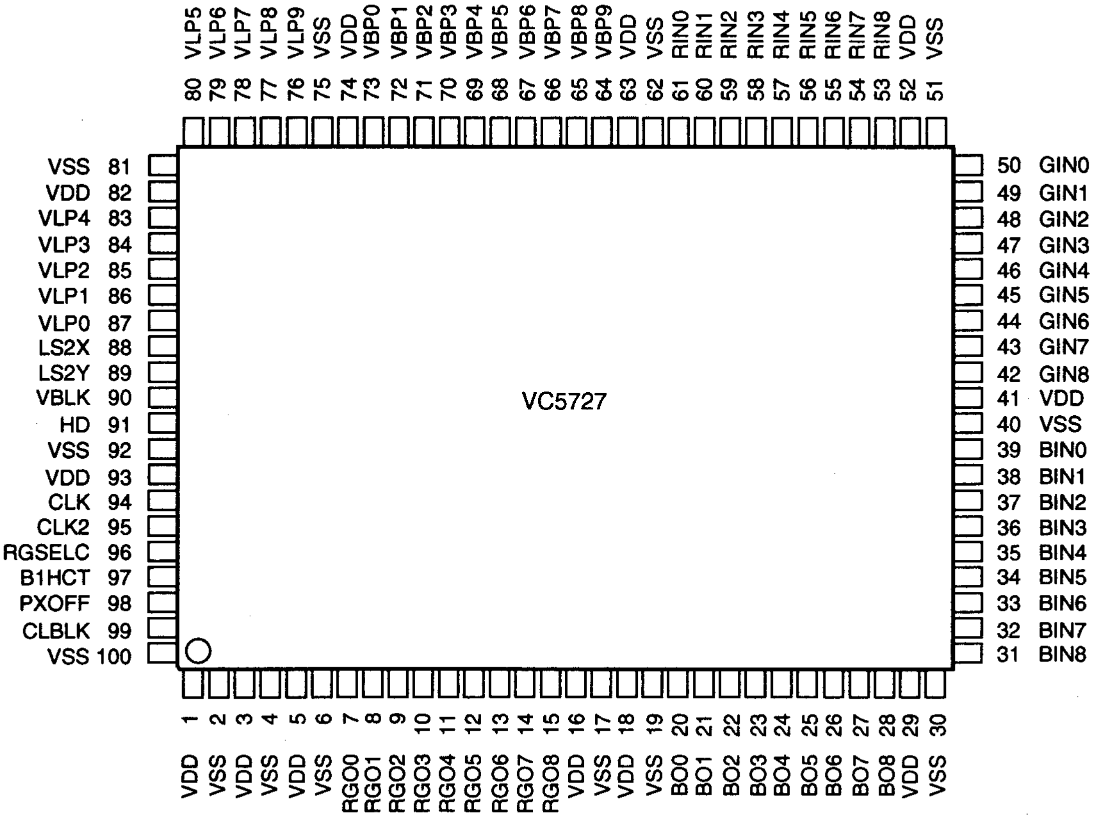

In/Out 1
Out/In 1
Out/In 2
In/Out 2
Control In 2
Control In 3
GND
1
2
3
4
5
6
7
14
13
12
11
10
9
8
VCC
Control In 1
Control In 4
In/Out 4
Out/In 4
Out/In 3
In/Out 3

(TOP VIEW)

**Truth Table**

| Input | Switch |
|---|---|
| Control | I/O – O/I |
| L | OFF |
| H | ON |

**10.** IC2 on the Digital Process Board is using the Gate Array Logic IC YWVC5727.
Description of this IC is as follows:

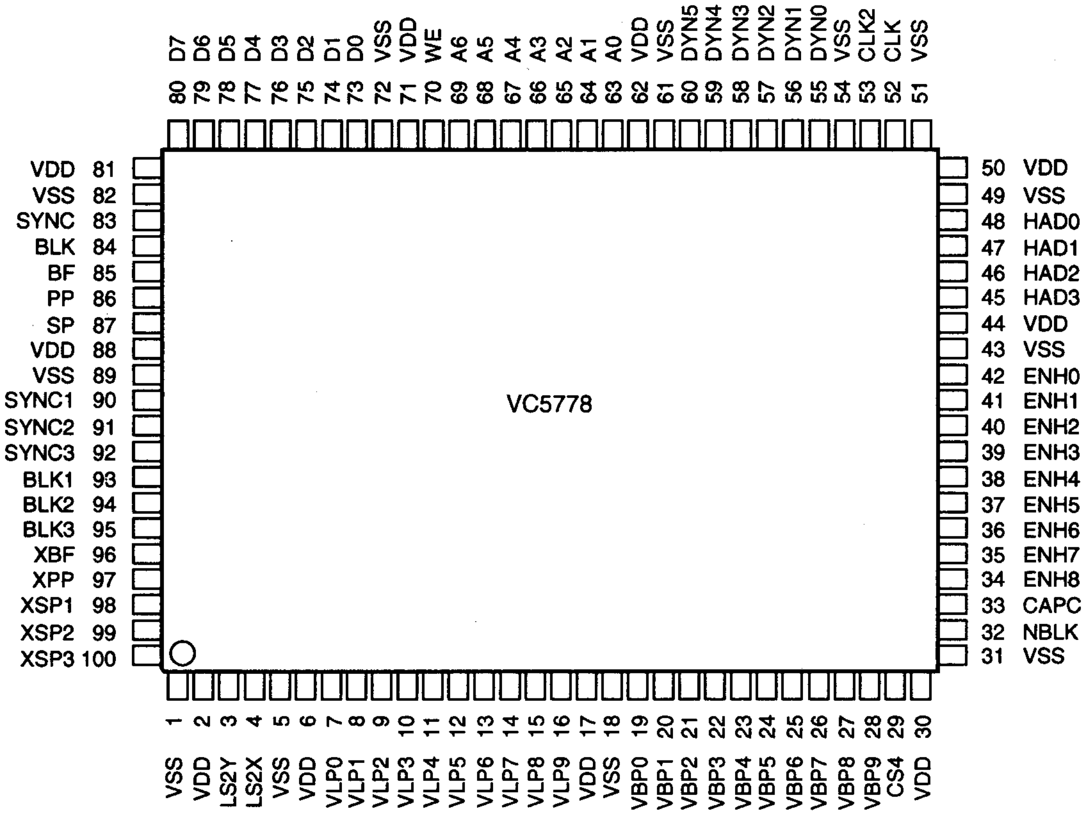

VC5727
1 VDD
2 VSS
3 VDD
4 VSS
5 VDD
6 VSS
7 RGO0
8 RGO1
9 RGO2
10 RGO3
11 RGO4
12 RGO5
13 RGO6
14 RGO7
15 RGO8
16 VDD
17 VSS
18 VDD
19 VSS
20 BO0
21 BO1
22 BO2
23 BO3
24 BO4
25 BO5
26 BO6
27 BO7
28 BO8
29 VDD
30 VSS
31 BIN8
32 BIN7
33 BIN6
34 BIN5
35 BIN4
36 BIN3
37 BIN2
38 BIN1
39 BIN0
40 VSS
41 VDD
42 GIN8
43 GIN7
44 GIN6
45 GIN5
46 GIN4
47 GIN3
48 GIN2
49 GIN1
50 GIN0
51 VSS
52 VDD
53 RIN8
54 RIN7
55 RIN6
56 RIN5
57 RIN4
58 RIN3
59 RIN2
60 RIN1
61 RIN0
62 VSS
63 VDD
64 VBP9
65 VBP8
66 VBP7
67 VBP6
68 VBP5
69 VBP4
70 VBP3
71 VBP2
72 VBP1
73 VBP0
74 VDD
75 VSS
76 VLP9
77 VLP8
78 VLP7
79 VLP6
80 VLP5
VSS 81
VDD 82
VLP4 83
VLP3 84
VLP2 85
VLP1 86
VLP0 87
LS2X 88
LS2Y 89
VBLK 90
HD 91
VSS 92
VDD 93
CLK 94
CLK2 95
RGSELC 96
B1HCT 97
PXOFF 98
CLBLK 99
VSS 100

**(TOP VIEW)**

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | VDD | – | Power supply terminal for I/O. |
| 2 | VSS | – | Ground terminal for I/O. |
| 3 | VDD | – | Power supply terminal for I/O. |
| 4 | VSS | – | Ground terminal for I/O. |
| 5 | VDD | – | Power supply terminal for I/O. |
| 6 | VSS | – | Ground terminal for I/O. |
| 7 | RGO0 | O | (LSB) |
| 8 | RGO1 | O | |
| 9 | RGO2 | O | |
| 10 | RGO3 | O | |
| 11 | RGO4 | O | RG23 signal output terminals. (9-Bit) |
| 12 | RGO5 | O | |
| 13 | RGO6 | O | |
| 14 | RGO7 | O | |
| 15 | RGO8 | O | (MSB) |
| 16 | VDD | – | Power supply terminal for I/O. |
| 17 | VSS | – | Ground terminal for Core. |
| 18 | VDD | – | Power supply terminal for Core. |
| 19 | VSS | – | Ground terminal for I/O. |
| 20 | BO0 | O | (LSB) |
| 21 | BO1 | O | |
| 22 | BO2 | O | |
| 23 | BO3 | O | B23 signal output terminals. (9-Bit) |
| 24 | BO4 | O | |
| 25 | BO5 | O | |
| 26 | BO6 | O | |
| 27 | BO7 | O | |
| 28 | BO8 | O | (MSB) |
| 29 | VDD | – | Power supply terminal for I/O. |
| 30 | VSS | – | Ground terminal for I/O. |
| 31 | BIN8 | I | (MSB) B12 signal input terminals. (9-Bit) |
| 32 | BIN7 | I | |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 33 | BIN6 | I | B12 signal input terminals. (9-Bit) |
| 34 | BIN5 | I | |
| 35 | BIN4 | I | |
| 36 | BIN3 | I | |
| 37 | BIN2 | I | |
| 38 | BIN1 | I | |
| 39 | BIN0 | I | (LSB) |
| 40 | VSS | – | Ground terminal for Core. |
| 41 | VDD | – | Power supply terminal for Core. |
| 42 | GIN8 | I | (MSB)<br>G12 signal input terminals. (9-Bit) |
| 43 | GIN7 | I | |
| 44 | GIN6 | I | |
| 45 | GIN5 | I | |
| 46 | GIN4 | I | |
| 47 | GIN3 | I | |
| 48 | GIN2 | I | |
| 49 | GIN1 | I | |
| 50 | GIN0 | I | (LSB) |
| 51 | VSS | – | Ground terminal for I/O. |
| 52 | VDD | – | Power supply terminal for I/O. |
| 53 | RIN8 | I | (MSB)<br>R12 signal input terminals. (9-Bit) |
| 54 | RIN7 | I | |
| 55 | RIN6 | I | |
| 56 | RIN5 | I | |
| 57 | RIN4 | I | |
| 58 | RIN3 | I | |
| 59 | RIN2 | I | |
| 60 | RIN1 | I | |
| 61 | RIN0 | I | (LSB) |
| 62 | VSS | – | Ground terminal for I/O. |
| 63 | VDD | – | Power supply terminal for I/O. |
| 64 | VBP9 | O | (MSB)<br>VB24 signal output terminals. (10-Bit) |
| 65 | VBP8 | O | |
| 66 | VBP7 | O | |
| 67 | VBP6 | O | |
| 68 | VBP5 | O | |
| 69 | VBP4 | O | |
| 70 | VBP3 | O | |
| 71 | VBP2 | O | |
| 72 | VBP1 | O | |
| 73 | VBP0 | O | (LSB) |
| 74 | VDD | – | Power supply terminal for I/O. |
| 75 | VSS | – | Ground terminal for I/O. |
| 76 | VLP9 | O | (MSB)<br>VL24 signal output terminals. (10-Bit) |
| 77 | VLP8 | O | |
| 78 | VLP7 | O | |
| 79 | VLP6 | O | |
| 80 | VLP5 | O | |
| 81 | VSS | – | Ground terminal for Core. |
| 82 | VDD | – | Power supply terminal for Core. |
| 83 | VLP4 | O | VL24 signal output terminals. (10-Bit) |
| 84 | VLP3 | O | |
| 85 | VLP2 | O | |
| 86 | VLP1 | O | |
| 87 | VLP0 | O | (LSB) |
| 88 | LS2X | I | LS2X signal input terminal. |
| 89 | LS2Y | I | LS2Y signal input terminal. |
| 90 | VBLK | I | VBLK signal input terminal. |
| 91 | HD | I | HD signal input terminal. |
| 92 | VSS | – | Ground terminal for I/O. |
| 93 | VDD | – | Power supply terminal for Core. |
| 94 | CLK | I | CLK signal input terminal. |
| 95 | CLK2 | I | CLK2 signal input terminal. |
| 96 | RGSELC | I | RGSELC signal input terminal. |
| 97 | B1HCT | I | B1HCT signal input terminal. |
| 98 | PXOFF | I | PXOFF signal input terminal. |
| 99 | CLBLK | I | CLBLK signal input terminal. |
| 100 | VSS | – | Ground terminal for Core. |

**11.** IC4 on the Digital Process Board is using the Gate Array Logic IC YWVC5778.
Description of this IC is as follows:


VC5778
80 D7
79 D6
78 D5
77 D4
76 D3
75 D2
74 D1
73 D0
72 VSS
71 VDD
70 WE
69 A6
68 A5
67 A4
66 A3
65 A2
64 A1
63 A0
62 VDD
61 VSS
60 DYN5
59 DYN4
58 DYN3
57 DYN2
56 DYN1
55 DYN0
54 VSS
53 CLK2
52 CLK
51 VSS
VDD 81
VSS 82
SYNC 83
BLK 84
BF 85
PP 86
SP 87
VDD 88
VSS 89
SYNC1 90
SYNC2 91
SYNC3 92
BLK1 93
BLK2 94
BLK3 95
XBF 96
XPP 97
XSP1 98
XSP2 99
XSP3 100
50 VDD
49 VSS
48 HAD0
47 HAD1
46 HAD2
45 HAD3
44 VDD
43 VSS
42 ENH0
41 ENH1
40 ENH2
39 ENH3
38 ENH4
37 ENH5
36 ENH6
35 ENH7
34 ENH8
33 CAPC
32 NBLK
31 VSS
1 VSS
2 VDD
3 LS2Y
4 LS2X
5 VSS
6 VDD
7 VLP0
8 VLP1
9 VLP2
10 VLP3
11 VLP4
12 VLP5
13 VLP6
14 VLP7
15 VLP8
16 VLP9
17 VDD
18 VSS
19 VBP0
20 VBP1
21 VBP2
22 VBP3
23 VBP4
24 VBP5
25 VBP6
26 VBP7
27 VBP8
28 VBP9
29 CS4
30 VDD

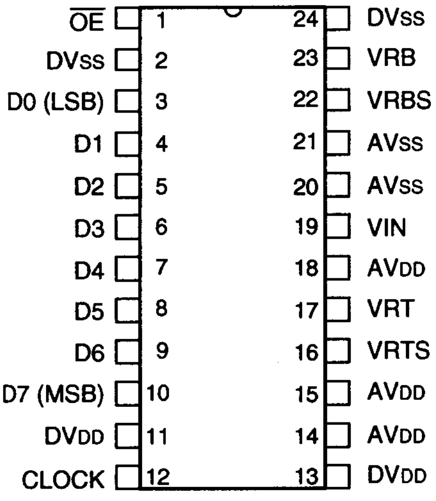
**(TOP VIEW)**

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | VSS | – | Ground terminal for I/O. |
| 2 | VDD | – | Power supply terminal for I/O. |
| 3 | LS2Y | O | LS2Y signal output terminal. |
| 4 | LS2X | O | LS2X signal output terminal. |
| 5 | VSS | – | Ground terminal for I/O. |
| 6 | VDD | – | Power supply terminal for I/O. |
| 7 | VLP0 | I | (LSB)<br>VL24 signal input terminals. (10-Bit) |
| 8 | VLP1 | I | |
| 9 | VLP2 | I | |
| 10 | VLP3 | I | |
| 11 | VLP4 | I | |
| 12 | VLP5 | I | |
| 13 | VLP6 | I | |
| 14 | VLP7 | I | |
| 15 | VLP8 | I | |
| 16 | VLP9 | I | (MSB) |

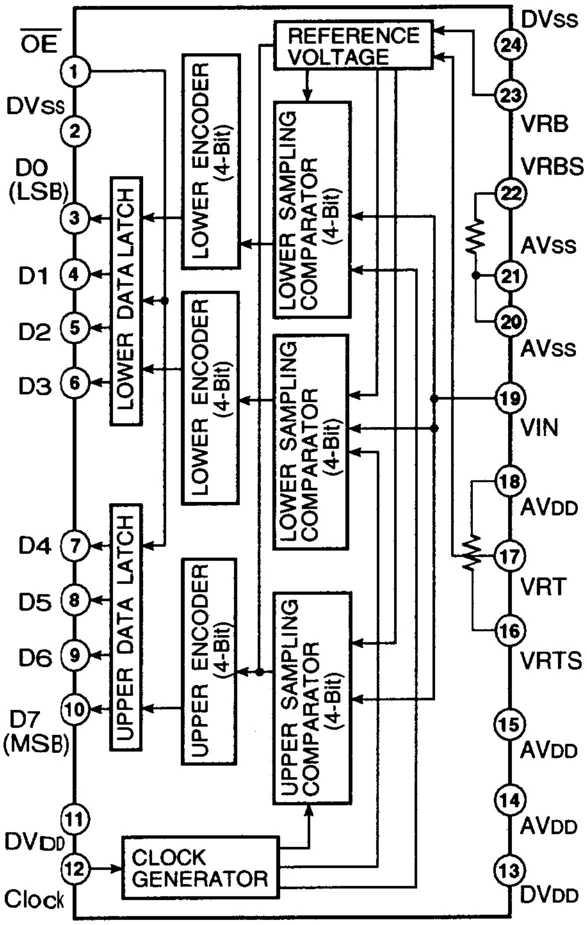
| Pin | Name | I/O | Description |
|---|---|---|---|
| 17 | VDD | – | Power supply terminal for Core. |
| 18 | VSS | – | Ground terminal for Core. |
| 19 | VBP0 | I | (LSB)<br>VB24 signal input terminals. (10-Bit) |
| 20 | VBP1 | I | |
| 21 | VBP2 | I | |
| 22 | VBP3 | I | |
| 23 | VBP4 | I | |
| 24 | VBP5 | I | |
| 25 | VBP6 | I | |
| 26 | VBP7 | I | |
| 27 | VBP8 | I | |
| 28 | VBP9 | I | (MSB) |
| 29 | CS4 | I | CS4 signal input terminal. |
| 30 | VDD | – | Power supply terminal for I/O. |
| 31 | VSS | – | Ground terminal for I/O. |
| 32 | NBLK | O | NBLK signal output terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 33 | CAPC | O | CAPC signal output terminal. |
| 34 | ENH8 | O | (LSB)<br>EN43 signal output terminals. (9-Bit) |
| 35 | ENH7 | O | |
| 36 | ENH6 | O | |
| 37 | ENH5 | O | |
| 38 | ENH4 | O | |
| 39 | ENH3 | O | |
| 40 | ENH2 | O | |
| 41 | ENH1 | O | |
| 42 | ENH0 | O | (MSB) |
| 43 | VSS | – | Ground terminal for I/O. |
| 44 | VDD | – | Power supply terminal for I/O. |
| 45 | HAD3 | I | HAD3 signal input terminal. |
| 46 | HAD2 | I | HAD2 signal input terminal. |
| 47 | HAD1 | I | HAD1 signal input terminal. |
| 48 | HAD0 | I | HAD0 signal input terminal. |
| 49 | VSS | – | Ground terminal for Core. |
| 50 | VDD | – | Power supply terminal for Core. |
| 51 | VSS | – | Ground terminal for I/O. |
| 52 | CLK | I | CLK1 Pulse input terminal. |
| 53 | CLK2 | I | CLK2 Pulse input terminal. |
| 54 | VSS | – | Ground terminal for I/O. |
| 55 | DYN0 | I | (MSB)<br>DYN signal input terminals. (6-Bit) |
| 56 | DYN1 | I | |
| 57 | DYN2 | I | |
| 58 | DYN3 | I | |
| 59 | DYN4 | I | |
| 60 | DYN5 | I | (LSB) |
| 61 | VSS | – | Ground terminal for Core. |
| 62 | VDD | – | Power supply terminal for Core. |
| 63 | A0 | I | (LSB)<br>Address signal input terminals. (7-Bit) |
| 64 | A1 | I | |
| 65 | A2 | I | |
| 66 | A3 | I | |
| 67 | A4 | I | |
| 68 | A5 | I | |
| 69 | A6 | I | (MSB) |
| 70 | WE | I | Write enable signal input terminal. |
| 71 | VDD | – | Power supply terminal for I/O. |
| 72 | VSS | – | Ground terminal for I/O. |
| 73 | D0 | I | (LSB)<br>Data input terminals. (8-Bit) |
| 74 | D1 | I | |
| 75 | D2 | I | Data input terminals. (8-Bit) |
| 76 | D3 | I | |
| 77 | D4 | I | |
| 78 | D5 | I | |
| 79 | D6 | I | |
| 80 | D7 | I | (MSB) |
| 81 | VDD | – | Power supply terminal for Core. |
| 82 | VSS | – | Ground terminal for Core. |
| 83 | SYNC | I | SYNC signal input terminal. |
| 84 | BLK | I | BLK signal input terminal. |
| 85 | BF | I | BF signal input terminal. |
| 86 | PP | I | PP signal input terminal. |
| 87 | SP | I | SP signal input terminal. |
| 88 | VDD | – | Power supply terminal for I/O. |
| 89 | VSS | – | Ground terminal for I/O. |
| 90 | SYNC1 | O | SYNC1 signal output terminal. |
| 91 | SYNC2 | O | SYNC2 signal output terminal. |
| 92 | SYNC3 | O | SYNC3 signal output terminal. |
| 93 | BLK1 | O | BLK1 signal output terminal. |
| 94 | BLK2 | O | BLK2 signal output terminal. |
| 95 | BLK3 | O | BLK3 signal output terminal. |
| 96 | XBF | O | XBF signal output terminal. |
| 97 | XPP | O | XPP signal output terminal. |
| 98 | XSP1 | O | XSP1 signal output terminal. |
| 99 | XSP2 | O | XSP2 signal output terminal. |
| 100 | XSP3 | O | XSP3 signal output terminal. |

**12.** IC6 to IC8 on the Digital Process Board are using the 8-Bit A/D Converter IC YWCX1175AM.
Description of this IC is as follows:

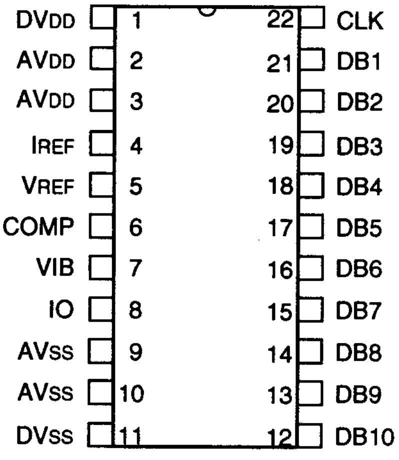

$\overline{\text{OE}}$ 1
DVss 2
D0 (LSB) 3
D1 4
D2 5
D3 6
D4 7
D5 8
D6 9
D7 (MSB) 10
DVDD 11
CLOCK 12
24 DVss
23 VRB
22 VRBS
21 AVss
20 AVss
19 VIN
18 AVDD
17 VRT
16 VRTS
15 AVDD
14 AVDD
13 DVDD

**(TOP VIEW)**

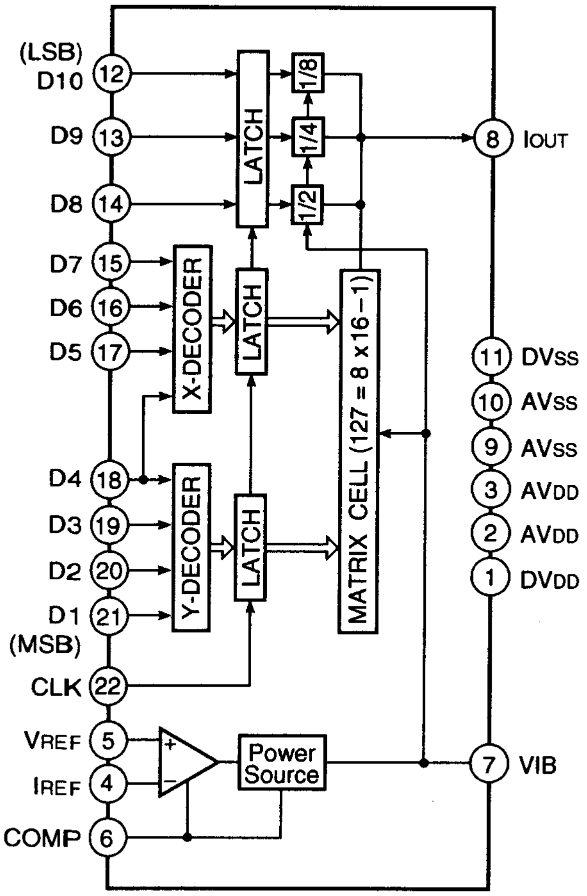

$\overline{\text{OE}}$
DVss
D0 (LSB)
D1
D2
D3
D4
D5
D6
D7 (MSB)
DVDD
Clock
REFERENCE VOLTAGE
LOWER ENCODER (4-Bit)
LOWER ENCODER (4-Bit)
UPPER ENCODER (4-Bit)
LOWER DATA LATCH
UPPER DATA LATCH
LOWER SAMPLING COMPARATOR (4-Bit)
LOWER SAMPLING COMPARATOR (4-Bit)
UPPER SAMPLING COMPARATOR (4-Bit)
CLOCK GENERATOR
DVss
VRB
VRBS
AVss
AVss
VIN
AVDD
VRT
VRTS
AVDD
AVDD
DVDD

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | $\overline{\text{OE}}$ | I | Output Enable signal input terminal. |
| 2 | DVSS | – | Ground terminal for Digital Circuit. |
| 3 | D0 | O | Digital Data D0 (LSB) output terminal. |
| 4 | D1 | O | Digital Data D1 (2nd.) output terminal. |
| 5 | D2 | O | Digital Data D2 (3rd.) output terminal. |
| 6 | D3 | O | Digital Data D3 (4th.) output terminal. |
| 7 | D4 | O | Digital Data D4 (5th.) output terminal. |
| 8 | D5 | O | Digital Data D5 (6th.) output terminal. |
| 9 | D6 | O | Digital Data D6 (7th.) output terminal. |
| 10 | D7 | O | Digital Data D7 (MSB) output terminal. |
| 11 | DVDD | – | Power supply terminal for Digital Circuit. |
| 12 | CLOCK | I | Clock input terminal. |
| 13 | DVDD | – | Power supply terminal for Digital Circuit. |
| 14 | AVDD | – | Power supply terminal for Analog Circuit. |
| 15 | AVDD | – | Power supply terminal for Analog Circuit. |
| 16 | VRTS | O | Top Voltage output terminal. |
| 17 | VRT | I | Top Voltage input terminal. |
| 18 | AVDD | – | Power supply terminal for Analog Circuit. |
| 19 | VIN | I | Analog signal input terminal. |
| 20 | AVSS | – | Ground terminal for Analog Circuit. |
| 21 | AVSS | – | Ground terminal for Analog Circuit. |
| 22 | VRBS | O | Bottom Voltage output terminal. |
| 23 | VRB | I | Bottom Voltage input terminal. |
| 24 | AVSS | – | Ground terminal for Digital Circuit. |

**13.** IC17 to IC20 on the Digital Process Board are using the 10-Bit D/A Converter IC MN6557AS.
Description of this IC is as follows:

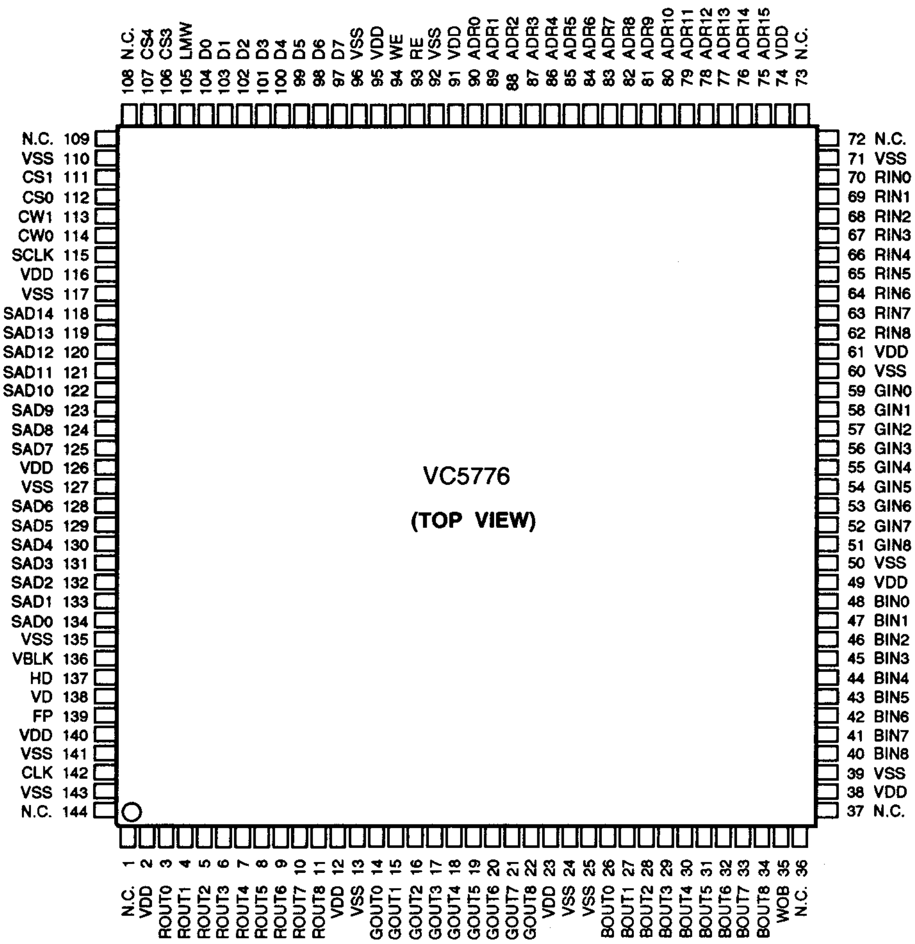

DVDD 1
AVDD 2
AVDD 3
IREF 4
VREF 5
COMP 6
VIB 7
IO 8
AVSS 9
AVSS 10
DVSS 11
22 CLK
21 DB1
20 DB2
19 DB3
18 DB4
17 DB5
16 DB6
15 DB7
14 DB8
13 DB9
12 DB10

(TOP VIEW)


(LSB) D10 12
D9 13
D8 14
D7 15
D6 16
D5 17
D4 18
D3 19
D2 20
D1 21 (MSB)
CLK 22
VREF 5
IREF 4
COMP 6
LATCH
1/8
1/4
1/2
X-DECODER
LATCH
Y-DECODER
LATCH
MATRIX CELL (127 = 8 x 16 − 1)
+
−
Power Source
8 IOUT
11 DVSS
10 AVSS
9 AVSS
3 AVDD
2 AVDD
1 DVDD
7 VIB

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | DVDD | – | Power supply terminal for Digital circuit. |
| 2 | AVDD | – | Power supply terminal for Analog circuit. |
| 3 | AVDD | – | Power supply terminal for Analog circuit. |
| 4 | IREF | I | Reference Current input terminal. |
| 5 | VREF | I | Reference Voltage input terminal. |
| 6 | COMP | I | Compensation input terminal. |
| 7 | VIB | I | VIB signal input terminal. |
| 8 | IO | O | Analog Data Current output terminal. |
| 9 | AVSS | – | Ground terminal for Analog Circuit. |
| 10 | AVSS | – | Ground terminal for Analog Circuit. |
| 11 | DVSS | – | Ground terminal for Digital Circuit. |
| 12 | DB10 | I | (LSB) |
| 13 | DB9 | I | |
| 14 | DB8 | I | |
| 15 | DB7 | I | |
| 16 | DB6 | I | Digital Data input terminals. (10-Bit) |
| 17 | DB5 | I | |
| 18 | DB4 | I | |
| 19 | DB3 | I | |
| 20 | DB2 | I | |
| 21 | DB1 | I | (MSB) |
| 22 | CLK | I | Clock Pulse input terminal. |

**14.** IC1 on the Digital Process Board is using the Gate Array Logic IC YWVC5776.
Description of this IC is as follows:


VC5776
(TOP VIEW)
108 N.C.
107 CS4
106 CS3
105 LMW
104 D0
103 D1
102 D2
101 D3
100 D4
99 D5
98 D6
97 D7
96 VSS
95 VDD
94 WE
93 RE
92 VSS
91 VDD
90 ADR0
89 ADR1
88 ADR2
87 ADR3
86 ADR4
85 ADR5
84 ADR6
83 ADR7
82 ADR8
81 ADR9
80 ADR10
79 ADR11
78 ADR12
77 ADR13
76 ADR14
75 ADR15
74 VDD
73 N.C.
N.C. 109
VSS 110
CS1 111
CS0 112
CW1 113
CW0 114
SCLK 115
VDD 116
VSS 117
SAD14 118
SAD13 119
SAD12 120
SAD11 121
SAD10 122
SAD9 123
SAD8 124
SAD7 125
VDD 126
VSS 127
SAD6 128
SAD5 129
SAD4 130
SAD3 131
SAD2 132
SAD1 133
SAD0 134
VSS 135
VBLK 136
HD 137
VD 138
FP 139
VDD 140
VSS 141
CLK 142
VSS 143
N.C. 144
72 N.C.
71 VSS
70 RIN0
69 RIN1
68 RIN2
67 RIN3
66 RIN4
65 RIN5
64 RIN6
63 RIN7
62 RIN8
61 VDD
60 VSS
59 GIN0
58 GIN1
57 GIN2
56 GIN3
55 GIN4
54 GIN5
53 GIN6
52 GIN7
51 GIN8
50 VSS
49 VDD
48 BIN0
47 BIN1
46 BIN2
45 BIN3
44 BIN4
43 BIN5
42 BIN6
41 BIN7
40 BIN8
39 VSS
38 VDD
37 N.C.
1 N.C.
2 VDD
3 ROUT0
4 ROUT1
5 ROUT2
6 ROUT3
7 ROUT4
8 ROUT5
9 ROUT6
10 ROUT7
11 ROUT8
12 VDD
13 VSS
14 GOUT0
15 GOUT1
16 GOUT2
17 GOUT3
18 GOUT4
19 GOUT5
20 GOUT6
21 GOUT7
22 GOUT8
23 VDD
24 VSS
25 VSS
26 BOUT0
27 BOUT1
28 BOUT2
29 BOUT3
30 BOUT4
31 BOUT5
32 BOUT6
33 BOUT7
34 BOUT8
35 WOB
36 N.C.

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | N.C. | – | Non Connection. |
| 2 | VDD | – | Power supply terminal for I/O. |
| 3 | ROUT0 | O | (LSB) R12 signal output terminals. (9-Bit) |
| 4 | ROUT1 | O | |
| 5 | ROUT2 | O | |
| 6 | ROUT3 | O | |
| 7 | ROUT4 | O | |
| 8 | ROUT5 | O | |
| 9 | ROUT6 | O | |
| 10 | ROUT7 | O | |
| 11 | ROUT8 | O | (MSB) |
| 12 | VDD | – | Power supply terminal for I/O. |
| 13 | VSS | – | Ground terminal for I/O. |
| 14 | GOUT0 | O | (LSB) G12 signal output terminals. (9-Bit) |

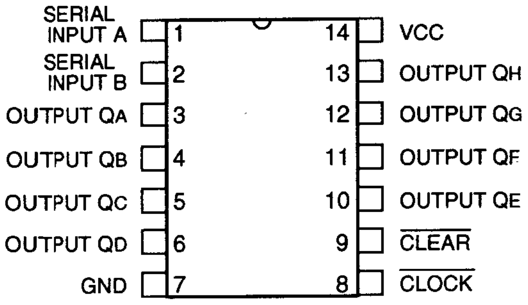
| Pin | Name | I/O | Description |
|---|---|---|---|
| 15 | GOUT1 | O | G12 signal output terminals. (9-Bit) |
| 16 | GOUT2 | O | |
| 17 | GOUT3 | O | |
| 18 | GOUT4 | O | |
| 19 | GOUT5 | O | |
| 20 | GOUT6 | O | |
| 21 | GOUT7 | O | |
| 22 | GOUT8 | O | (MSB) |
| 23 | VDD | – | Power supply terminal for Core. |
| 24 | VSS | – | Ground terminal for Core. |
| 25 | VSS | – | Ground terminal for I/O. |
| 26 | BOUT0 | O | (LSB) B12 signal output terminals. (9-Bit) |
| 27 | BOUT1 | O | |
| 28 | BOUT2 | O | |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 29 | BOUT3 | O | B12 signal output terminals. (9-Bit) |
| 30 | BOUT4 | O | |
| 31 | BOUT5 | O | |
| 32 | BOUT6 | O | |
| 33 | BOUT7 | O | |
| 34 | BOUT8 | O | (MSB) |
| 35 | WOB | O | WOB signal output terminal. |
| 36 | N.C. | – | Non Connection. |
| 37 | N.C. | – | Non Connection. |
| 38 | VDD | – | Power supply terminal for I/O. |
| 39 | VSS | – | Ground terminal for I/O. |
| 40 | BIN8 | I | (MSB)<br>BA/D signal input terminals. (9-Bit) |
| 41 | BIN7 | I | |
| 42 | BIN6 | I | |
| 43 | BIN5 | I | |
| 44 | BIN4 | I | |
| 45 | BIN3 | I | |
| 46 | BIN2 | I | |
| 47 | BIN1 | I | |
| 48 | BIN0 | I | (LSB) |
| 49 | VDD | – | Power supply terminal for I/O. |
| 50 | VSS | – | Ground terminal for I/O. |
| 51 | GIN8 | I | (MSB)<br>GA/D signal input terminals. (9-Bit) |
| 52 | GIN7 | I | |
| 53 | GIN6 | I | |
| 54 | GIN5 | I | |
| 55 | GIN4 | I | |
| 56 | GIN3 | I | |
| 57 | GIN2 | I | |
| 58 | GIN1 | I | |
| 59 | GIN0 | I | (LSB) |
| 60 | VSS | – | Ground terminal for Core. |
| 61 | VDD | – | Power supply terminal for Core. |
| 62 | RIN8 | I | (MSB)<br>RA/D signal input terminals. (9-Bit) |
| 63 | RIN7 | I | |
| 64 | RIN6 | I | |
| 65 | RIN5 | I | |
| 66 | RIN4 | I | |
| 67 | RIN3 | I | |
| 68 | RIN2 | I | |
| 69 | RIN1 | I | |
| 70 | RIN0 | I | (LSB) |
| 71 | VSS | – | Ground terminal for I/O. |
| 72 | N.C. | – | Non Connection. |
| 73 | N.C. | – | Non Connection. |
| 74 | VDD | – | Power supply terminal for I/O. |
| 75 | ADR15 | I | (MSB)<br>Address input terminals. (16-Bit) |
| 76 | ADR14 | I | |
| 77 | ADR13 | I | |
| 78 | ADR12 | I | |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 79 | ADR11 | I | Address input terminals. (16-Bit) |
| 80 | ADR10 | I | |
| 81 | ADR9 | I | |
| 82 | ADR8 | I | |
| 83 | ADR7 | I | |
| 84 | ADR6 | I | |
| 85 | ADR5 | I | |
| 86 | ADR4 | I | |
| 87 | ADR3 | I | |
| 88 | ADR2 | I | |
| 89 | ADR1 | I | |
| 90 | ADR0 | I | (LSB) |
| 91 | VDD | – | Power supply terminal for Core. |
| 92 | VSS | – | Ground terminal for Core. |
| 93 | WE | I | Write enable signal input terminal. |
| 94 | RE | I | Read enable signal input terminal. |
| 95 | VDD | – | Power supply terminal for I/O. |
| 96 | VSS | – | Ground terminal for I/O. |
| 97 | D7 | I/O | (MSB)<br>Data Tri-state input/ outputterminals. (8-Bit) |
| 98 | D6 | I/O | |
| 99 | D5 | I/O | |
| 100 | D4 | I/O | |
| 101 | D3 | I/O | |
| 102 | D2 | I/O | |
| 103 | D1 | I/O | |
| 104 | D0 | I/O | (LSB) |
| 105 | LMW | O | LMW signal output terminal. |
| 106 | CS3 | O | CS3 signal output terminal. |
| 107 | CS4 | O | CS4 signal output terminal. |
| 108 | N.C. | – | Non Connection. |
| 109 | N.C. | – | Non Connection. |
| 110 | VSS | – | Ground terminal for I/O. |
| 111 | CS1 | O | CS1 signal output terminal. |
| 112 | CS0 | O | CS0 signal output terminal. |
| 113 | CW1 | O | CW1 signal output terminal. |
| 114 | CW0 | O | CW0 signal output terminal. |
| 115 | SCLK | O | SCLK Pulse output terminal. |
| 116 | VDD | – | Power supply terminal for Core. |
| 117 | VSS | – | Ground terminal for Core. |
| 118 | SAD14 | O | (MSB)<br>SAD signal output terminals. (15-Bit) |
| 119 | SAD13 | O | |
| 120 | SAD12 | O | |
| 121 | SAD11 | O | |
| 122 | SAD10 | O | |
| 123 | SAD9 | O | |
| 124 | SAD8 | O | |
| 125 | SAD7 | O | |
| 126 | VDD | – | Power supply terminal for I/O. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 127 | VDD | – | Power supply terminal for I/O. |
| 128 | SAD6 | O | SAD signal outputput terminals. (15-Bit) |
| 129 | SAD5 | O | |
| 130 | SAD4 | O | |
| 131 | SAD3 | O | |
| 132 | SAD2 | O | |
| 133 | SAD1 | O | |
| 134 | SAD0 | O | (LSB) |
| 135 | VSS | – | Ground terminal for I/O. |
| 136 | VBLK | I | VBLK signal input terminal. |
| 137 | HD | I | HD signal input terminal. |
| 138 | VD | I | VD signal input terminal. |
| 139 | FP | I | FP signal input terminal. |
| 140 | VDD | – | Power supply terminal for I/O. |
| 141 | VSS | – | Ground terminal for I/O. |
| 142 | CLK | I | CLK Pulse input terminal. |
| 143 | VSS | – | Ground terminal for I/O. |
| 144 | N.C. | – | Non connection. |

**15.** IC10 on the Digital Process Board is using the 8-Bit Shift Register IC YWHD74AC164F.
Description of this IC is as follows:


SERIAL INPUT A
SERIAL INPUT B
OUTPUT QA
OUTPUT QB
OUTPUT QC
OUTPUT QD
GND
1
2
3
4
5
6
7
14
13
12
11
10
9
8
VCC
OUTPUT QH
OUTPUT QG
OUTPUT QF
OUTPUT QE
CLEAR
CLOCK

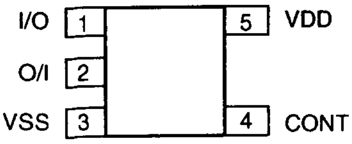
(TOP VIEW)

**Truth Table**

| INPUTS | | Function |
|---|---|---|
| $\overline{\text{CLEAR}}$ | CLOCK | |
| H | ↑ | Right Shift |
| ⊔ | * | Clear |

* : Don't care.

**16.** IC21 on the Digital Process Board and IC6 on the Sync Board are using the Single Analog Switch/Multiplexer/Demultiplexer IC YWTC4S66FR.
Description of this IC is as follows:

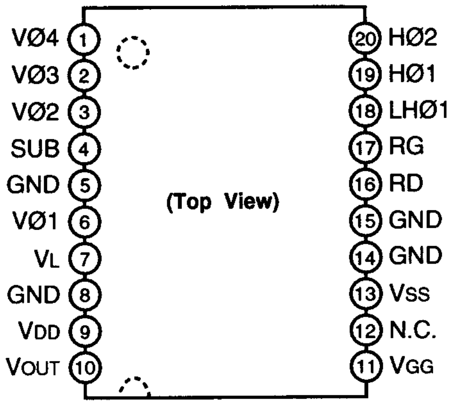

I/O
O/I
VSS
1
2
3
5
4
VDD
CONT

(TOP VIEW)

**Truth Table**

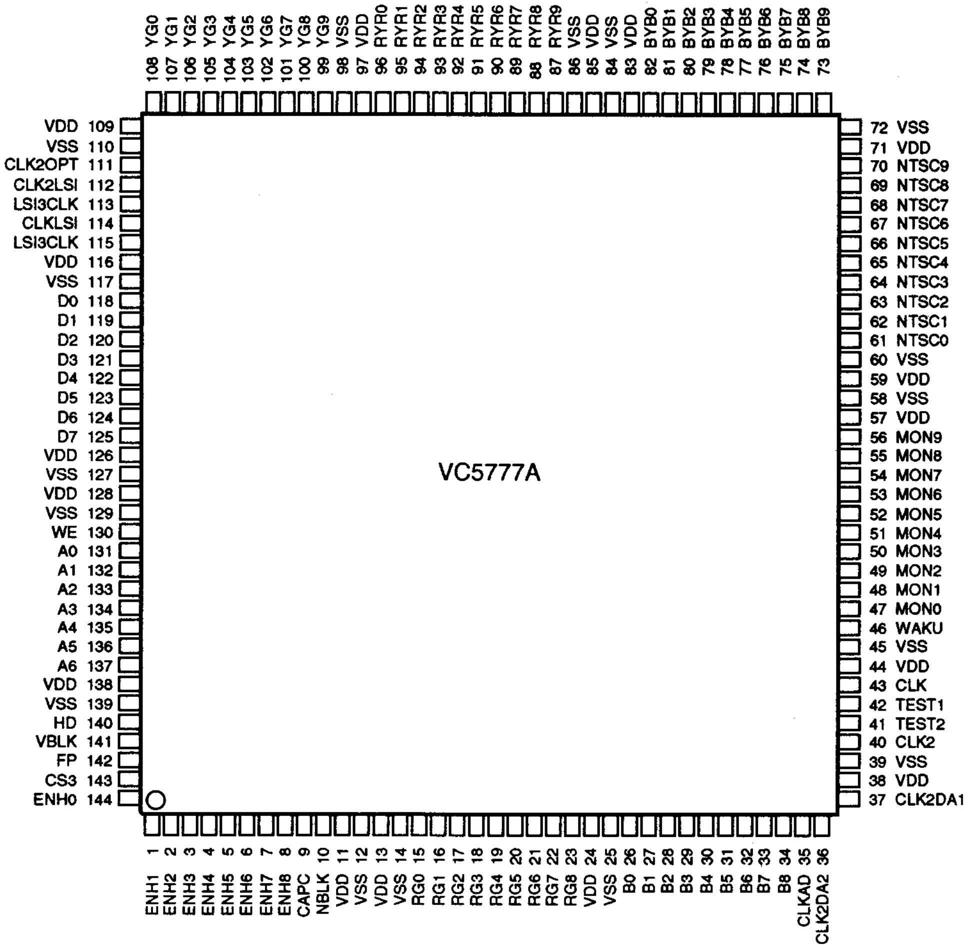
| Input | Switch |
|---|---|
| Control | I/O – O/I |
| L | OFF |
| H | ON |

**17.** IC101, IC201 and IC301 on the Sensor Board are using the CCD Image Sensor IC ICX038BLA.
Description of this IC is as follows:


VØ4 1
VØ3 2
VØ2 3
SUB 4
GND 5
VØ1 6
VL 7
GND 8
VDD 9
VOUT 10
20 HØ2
19 HØ1
18 LHØ1
17 RG
16 RD
15 GND
14 GND
13 Vss
12 N.C.
11 VGG
(Top View)

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | Vø4 | I | Vertical Register Transfer Clock input terminal. |
| 2 | Vø3 | I | Vertical Register Transfer Clock input terminal. |
| 3 | Vø2 | I | Vertical Register Transfer Clock input terminal. |
| 4 | SUB | – | Board (Overflow Drain). |
| 5 | GND | – | Ground terminal. |
| 6 | Vø1 | I | Vertical Register Transfer Clock input terminal. |
| 7 | VL | I | Bias supply terminal for protection transistor. |
| 8 | GND | – | Ground terminal. |
| 9 | VDD | – | Power supply terminal for Drain Output Amp. |
| 10 | VOUT | O | Signal output terminal. |
| 11 | VGG | – | Gate bias supply terminal for Output Amp. |
| 12 | N.C. | – | Non connection. |
| 13 | Vss | – | Power supply terminal for Source Output Amp. |
| 14 | GND | – | Ground terminal. |
| 15 | GND | – | Ground terminal. |
| 16 | RD | I | Reset Drain Bias input terminal. |
| 17 | RG | I | Reset Gate Clock input terminal. |
| 18 | LHø1 | I | Transfer Clock input terminal for last stage of Horizontal register. |
| 19 | Hø1 | I | Horizontal Register Transfer Clock input terminal. |
| 20 | Hø2 | I | Horizontal Register Transfer Clock input terminal. |

**18.** IC3 on the Digital Process Board is using the Gate Array Logic IC YWVC5777A.
Description of this IC is as follows:


108 YG0
107 YG1
106 YG2
105 YG3
104 YG4
103 YG5
102 YG6
101 YG7
100 YG8
99 YG9
98 VSS
97 VDD
96 RYR0
95 RYR1
94 RYR2
93 RYR3
92 RYR4
91 RYR5
90 RYR6
89 RYR7
88 RYR8
87 RYR9
86 VSS
85 VDD
84 VSS
83 VDD
82 BYB0
81 BYB1
80 BYB2
79 BYB3
78 BYB4
77 BYB5
76 BYB6
75 BYB7
74 BYB8
73 BYB9
VDD 109
VSS 110
CLK2OPT 111
CLK2LSI 112
LSI3CLK 113
CLKLSI 114
LSI3CLK 115
VDD 116
VSS 117
D0 118
D1 119
D2 120
D3 121
D4 122
D5 123
D6 124
D7 125
VDD 126
VSS 127
VDD 128
VSS 129
WE 130
A0 131
A1 132
A2 133
A3 134
A4 135
A5 136
A6 137
VDD 138
VSS 139
HD 140
VBLK 141
FP 142
CS3 143
ENH0 144
VC5777A
72 VSS
71 VDD
70 NTSC9
69 NTSC8
68 NTSC7
67 NTSC6
66 NTSC5
65 NTSC4
64 NTSC3
63 NTSC2
62 NTSC1
61 NTSC0
60 VSS
59 VDD
58 VSS
57 VDD
56 MON9
55 MON8
54 MON7
53 MON6
52 MON5
51 MON4
50 MON3
49 MON2
48 MON1
47 MON0
46 WAKU
45 VSS
44 VDD
43 CLK
42 TEST1
41 TEST2
40 CLK2
39 VSS
38 VDD
37 CLK2DA1
1 ENH1
2 ENH2
3 ENH3
4 ENH4
5 ENH5
6 ENH6
7 ENH7
8 ENH8
9 CAPC
10 NBLK
11 VDD
12 VSS
13 VDD
14 VSS
15 RG0
16 RG1
17 RG2
18 RG3
19 RG4
20 RG5
21 RG6
22 RG7
23 RG8
24 VDD
25 VSS
26 B0
27 B1
28 B2
29 B3
30 B4
31 B5
32 B6
33 B7
34 B8
35 CLKAD
36 CLK2DA2

(TOP VIEW)

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | ENH1 | I | EN43 signal input terminals. (9-Bit) |
| 2 | ENH2 | I | |
| 3 | ENH3 | I | |
| 4 | ENH4 | I | |
| 5 | ENH5 | I | |
| 6 | ENH6 | I | |
| 7 | ENH7 | I | |
| 8 | ENH8 | I | (MSB) |
| 9 | CAPC | I | CAPC signal input terminal. |
| 10 | NBLK | I | NBLK signal input terminal. |
| 11 | VDD | – | Power supply terminal for I/O. |
| 12 | VSS | – | Ground terminal for I/O. |
| 13 | VDD | – | Power supply terminal for Core. |
| 14 | VSS | – | Ground terminal for Core. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 15 | RG0 | I | (LSB)<br>RG23 signal input terminals. (9-Bit) |
| 16 | RG1 | I | |
| 17 | RG2 | I | |
| 18 | RG3 | I | |
| 19 | RG4 | I | |
| 20 | RG5 | I | |
| 21 | RG6 | I | |
| 22 | RG7 | I | |
| 23 | RG8 | I | (MSB) |
| 24 | VDD | – | Power supply terminal for I/O. |
| 25 | VSS | – | Ground terminal for I/O. |
| 26 | B0 | I | (LSB)<br>B23 signal input terminals. (9-Bit) |
| 27 | B1 | I | |
| 28 | B2 | I | |

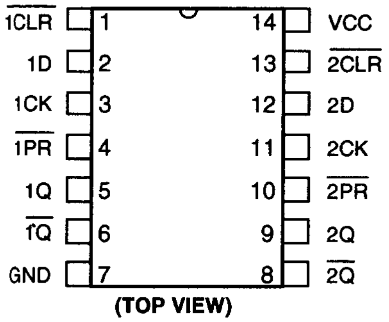
| Pin | Name | I/O | Description |
|---|---|---|---|
| 29 | B3 | I | |
| 30 | B4 | I | |
| 31 | B5 | I | B23 signal input terminals. (9-Bit) |
| 32 | B6 | I | |
| 33 | B7 | I | |
| 34 | B8 | I | (MSB) |
| 35 | CLKAD | O | CLKAD Pulse output terminal. |
| 36 | CLK2DA2 | O | CLK2DA2 Pulse output terminal. |
| 37 | CLK2DA1 | O | CLK2DA1 Pulse output terminal. |
| 38 | VDD | – | Power supply terminal for I/O. |
| 39 | VSS | – | Ground terminal for I/O. |
| 40 | CLK2 | O | CLK2 Pulse output terminal. |
| 41 | TEST2 | I | Test terminal 2. |
| 42 | TEST1 | I | Test terminal 1. |
| 43 | CLK | O | CLK Pulse output terminal. |
| 44 | VDD | – | Power supply terminal for I/O. |
| 45 | VSS | – | Ground terminal for I/O. |
| 46 | WAKU | O | WAKU signal output terminal. |
| 47 | MON0 | O | (LSB) |
| 48 | MON1 | O | |
| 49 | MON2 | O | |
| 50 | MON3 | O | |
| 51 | MON4 | O | Monitor signal output terminals. (10-Bit) |
| 52 | MON5 | O | |
| 53 | MON6 | O | |
| 54 | MON7 | O | |
| 55 | MON8 | O | |
| 56 | MON9 | O | (MSB) |
| 57 | VDD | – | Power supply terminal for I/O. |
| 58 | VSS | – | Ground terminal for I/O. |
| 59 | VDD | – | Power supply terminal for Core. |
| 60 | VSS | – | Ground terminal for Core. |
| 61 | NTSC0 | O | (LSB) |
| 62 | NTSC1 | O | |
| 63 | NTSC2 | O | |
| 64 | NTSC3 | O | |
| 65 | NTSC4 | O | NTSC signal output terminals. (10-Bit) |
| 66 | NTSC5 | O | |
| 67 | NTSC6 | O | |
| 68 | NTSC7 | O | |
| 69 | NTSC8 | O | |
| 70 | NTSC9 | O | (MSB) |
| 71 | VDD | – | Power supply terminal for I/O. |
| 72 | VSS | – | Ground terminal for I/O. |
| 73 | BYB9 | O | (MSB) |
| 74 | BYB8 | O | |
| 75 | BYB7 | O | |
| 76 | BYB6 | O | BYB signal output terminals. (10-Bit) |
| 77 | BYB5 | O | |
| 78 | BYB4 | O | |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 79 | BYB3 | O | |
| 80 | BYB2 | O | BYB signal output terminals. (10-Bit) |
| 81 | BYB1 | O | |
| 82 | BYB0 | O | (LSB) |
| 83 | VDD | – | Power supply terminal for I/O. |
| 84 | VSS | – | Ground terminal for I/O. |
| 85 | VDD | – | Power supply terminal for Core. |
| 86 | VSS | – | Ground terminal for Core. |
| 87 | RYR9 | O | (MSB) |
| 88 | RYR8 | O | |
| 89 | RYR7 | O | |
| 90 | RYR6 | O | |
| 91 | RYR5 | O | RYR signal output terminals. (10-Bit) |
| 92 | RYR4 | O | |
| 93 | RYR3 | O | |
| 94 | RYR2 | O | |
| 95 | RYR1 | O | |
| 96 | RYR0 | O | (LSB) |
| 97 | VDD | – | Power supply terminal for I/O. |
| 98 | VSS | – | Ground terminal for I/O. |
| 99 | YG9 | O | (MSB) |
| 100 | YG8 | O | |
| 101 | YG7 | O | |
| 102 | YG6 | O | |
| 103 | YG5 | O | YG signal output terminals. (10-Bit) |
| 104 | YG4 | O | |
| 105 | YG3 | O | |
| 106 | YG2 | O | |
| 107 | YG1 | O | |
| 108 | YG0 | O | (LSB) |
| 109 | VDD | – | Power supply terminal for I/O. |
| 110 | VSS | – | Ground terminal for I/O. |
| 111 | CLK2OPT | O | CLK2OPT Pulse output terminal. |
| 112 | CLK2LSI | O | CLK2LSI Pulse output terminal. |
| 113 | LSI3CLK2 | I | LSI3CLK2 Pulse input terminal. |
| 114 | CLKLSI | O | CLKLSI Pulse output terminal. |
| 115 | LSI3CLK | I | LSI3CLK Pulse input terminal. |
| 116 | VDD | – | Power supply terminal for I/O. |
| 117 | VSS | – | Ground terminal for I/O. |
| 118 | D0 | I | (LSB) |
| 119 | D1 | I | |
| 120 | D2 | I | |
| 121 | D3 | I | Data input terminals. (8-Bit) |
| 122 | D4 | I | |
| 123 | D5 | I | |
| 124 | D6 | I | |
| 125 | D7 | I | (MSB) |
| 126 | VDD | – | Power supply terminal for I/O. |
| 127 | VSS | – | Ground terminal for I/O. |
| 128 | VDD | – | Power supply terminal for Core. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 129 | VSS | – | Ground terminal for I/O. |
| 130 | WE | I | Write enable signal input terminal. |
| 131 | ADR0 | I | (LSB)<br>Address input terminals. (7-Bit) |
| 132 | ADR1 | I | |
| 133 | ADR2 | I | |
| 134 | ADR3 | I | |
| 135 | ADR4 | I | |
| 136 | ADR5 | I | |
| 137 | ADR6 | I | (MSB) |
| 138 | VDD | – | Power supply terminal for I/O. |
| 139 | VSS | – | Ground terminal for I/O. |
| 140 | HD | I | HD signal input terminal. |
| 141 | VBLK | I | VBLK signal input terminal. |
| 142 | FP | I | FP signal input terminal. |
| 143 | CS3 | I | CS3 signal input terminal. |
| 144 | ENH0 | I | (LSB) ENH43 signal input terminals. (9-Bit) |

**19.** IC15 on the Digital Process Board is using the Dual D-FFs with Preset and Clear IC YWTC74AC74F.

Description of this IC is as follows:


1CLR
1
1D
2
1CK
3
1PR
4
1Q
5
1Q
6
GND
7
14
VCC
13
2CLR
12
2D
11
2CK
10
2PR
9
2Q
8
2Q
(TOP VIEW)

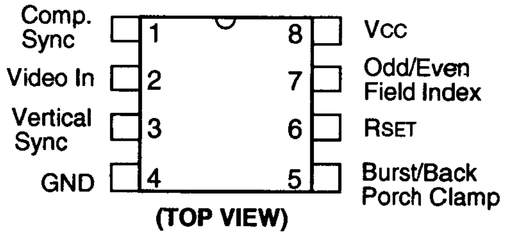
**Truth Table**

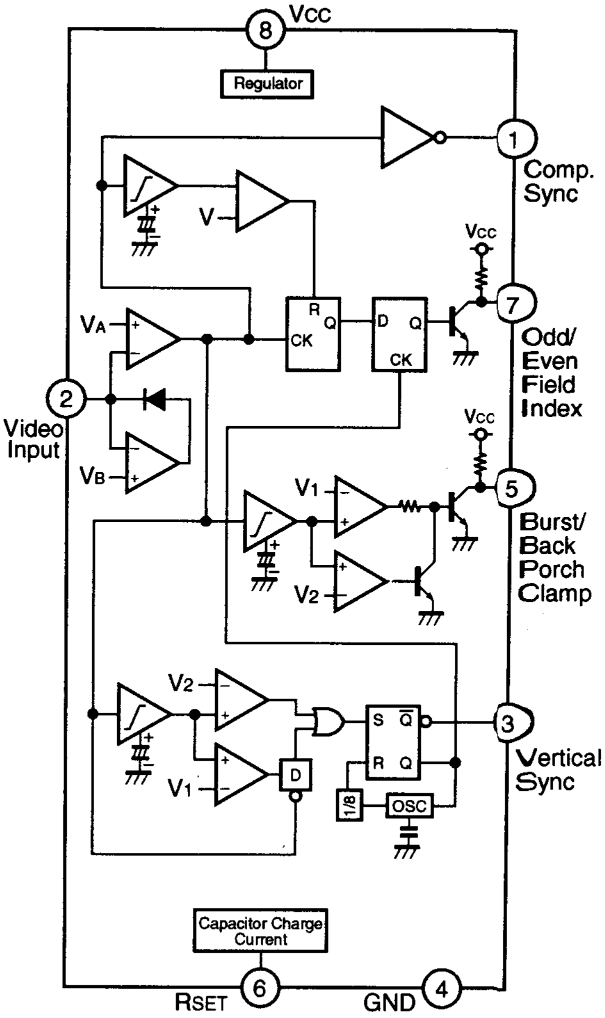
| INPUTS | | | | OUTPUTS | | Function |
|---|---|---|---|---|---|---|
| $\overline{CLR}$ | $\overline{PR}$ | D | CK | Q | $\overline{Q}$ | |
| L | H | * | * | L | H | Clear |
| H | L | * | * | H | L | Preset |
| L | L | * | * | H | H | —— |
| H | H | L | ↑ | L | H | —— |
| H | H | H | ↑ | H | L | —— |
| H | H | * | ↓ | Qn | $\overline{Qn}$ | No Change |

* : Don't care.

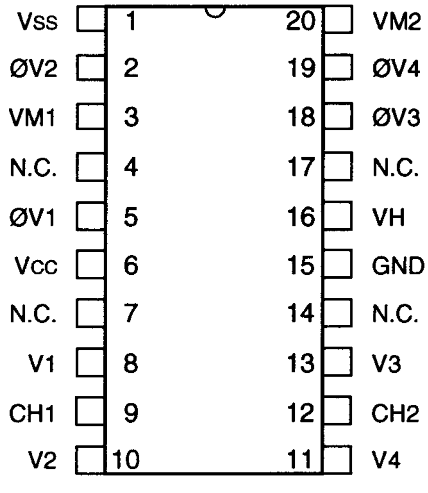
**20.** IC11 on the Sync Board is using the Sync Separator IC YWLM1881M.

Description of this IC is as follows:

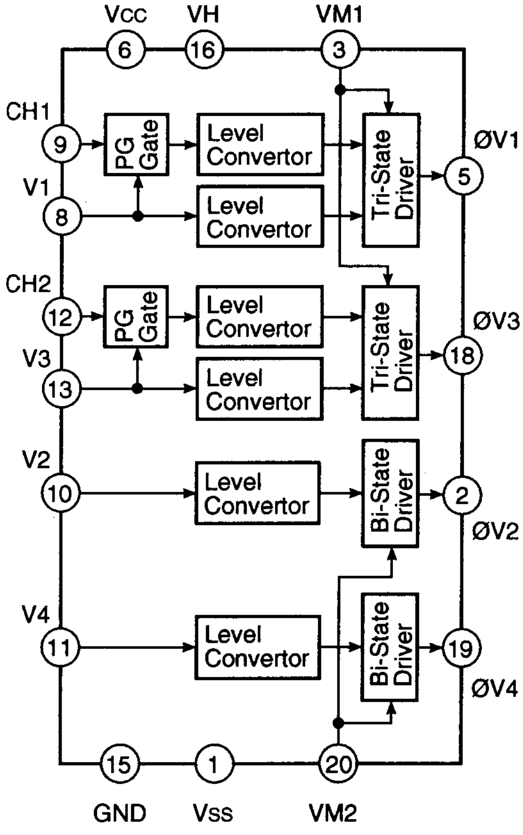

Comp. Sync
1
Video In
2
Vertical Sync
3
GND
4
8
Vcc
7
Odd/Even Field Index
6
RSET
5
Burst/Back Porch Clamp
(TOP VIEW)


8
Vcc
Regulator
1
Comp. Sync
V-
Vcc
VA
R
Q
CK
D
Q
CK
7
Odd/Even Field Index
2
Video Input
VB
Vcc
V1
5
Burst/Back Porch Clamp
V2
V2
S Q
R Q
3
Vertical Sync
V1
D
1/8
OSC
Capacitor Charge Current
RSET
6
GND
4

**21.** IC2 on the Sensor Board is using the Vertical Driver IC YWUPD16502GS.
Description of this IC is as follows:

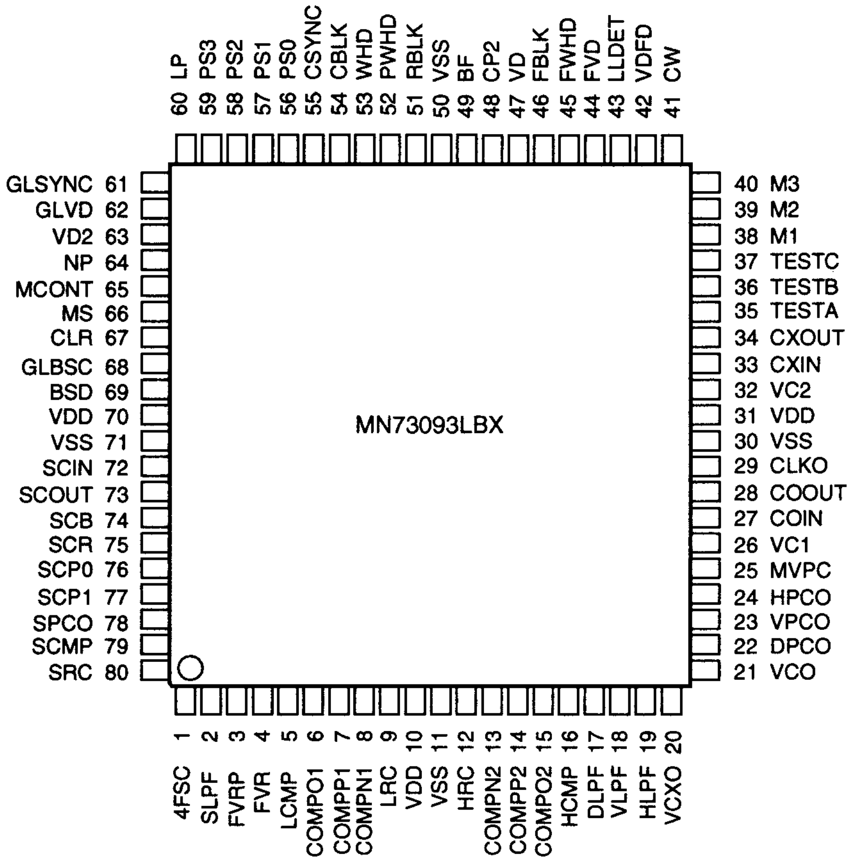

Vss 1
ØV2 2
VM1 3
N.C. 4
ØV1 5
Vcc 6
N.C. 7
V1 8
CH1 9
V2 10
V4 11
CH2 12
V3 13
N.C. 14
GND 15
VH 16
N.C. 17
ØV3 18
ØV4 19
VM2 20

**(TOP VIEW)**


Vcc
VH
VM1
CH1
V1
CH2
V3
V2
V4
PG Gate
Level Convertor
Tri-State Driver
Bi-State Driver
ØV1
ØV3
ØV2
ØV4
GND
Vss
VM2

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | VSS | – | Negative Voltage supply terminal. |
| 2 | ØV2 | O | Bi-State output terminal 1. |
| 3 | VM1 | – | Middle Voltage supply terminal for Tri-State Drivers. |
| 4 | N.C. | – | Non Connection. |
| 5 | ØV1 | O | Tri-State input terminal 1. |
| 6 | Vcc | – | Power supply for input circuit section. |
| 7 | N.C. | – | Non Connection. |
| 8 | V1 | I | Tri-State input terminal 1. |
| 9 | CH1 | I | Photodiode Gate input terminal 1. |
| 10 | V2 | I | Bi-State input terminal 1. |
| 11 | V4 | I | Bi-State input terminal 2. |
| 12 | CH2 | I | Photodiode Gate input terminal 2. |
| 13 | V3 | I | Tri-State input terminal 2. |
| 14 | N.C. | – | Non Connection. |
| 15 | GND | – | Ground terminal. |
| 16 | VH | – | High Voltage supply terminal for Tri-State Drivers. |
| 17 | N.C. | – | Non Connection. |
| 18 | ØV3 | O | Tri-State input terminal 2. |
| 19 | ØV4 | O | Bi-State output terminal 2. |
| 20 | VM2 | – | Middle Voltage supply terminal for Bi-State Drivers. |

**22.** IC3 on the Sync Board is using the Sync Generator IC MN73093LBX.
Description of this IC is as follows:

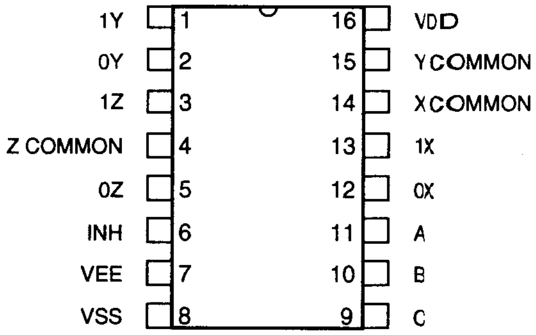

60 LP
59 PS3
58 PS2
57 PS1
56 PS0
55 CSYNC
54 CBLK
53 WHD
52 PWHD
51 RBLK
50 VSS
49 BF
48 CP2
47 VD
46 FBLK
45 FWHD
44 FVD
43 LLDET
42 VDFD
41 CW
GLSYNC 61
GLVD 62
VD2 63
NP 64
MCONT 65
MS 66
CLR 67
GLBSC 68
BSD 69
VDD 70
VSS 71
SCIN 72
SCOUT 73
SCB 74
SCR 75
SCP0 76
SCP1 77
SPCO 78
SCMP 79
SRC 80
MN73093LBX
40 M3
39 M2
38 M1
37 TESTC
36 TESTB
35 TESTA
34 CXOUT
33 CXIN
32 VC2
31 VDD
30 VSS
29 CLKO
28 COOUT
27 COIN
26 VC1
25 MVPC
24 HPCO
23 VPCO
22 DPCO
21 VCO
1 4FSC
2 SLPF
3 FVRP
4 FVR
5 LCMP
6 COMPO1
7 COMPP1
8 COMPN1
9 LRC
10 VDD
11 VSS
12 HRC
13 COMPN2
14 COMPP2
15 COMPO2
16 HCMP
17 DLPF
18 VLPF
19 HLPF
20 VCXO

**(TOP VIEW)**

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | 4FSC | O | 4FSC Signal output terminal. |
| 2 | SLPF | I | SLPF signal input terminal. |
| 3 | FVRP | I | FVRP signal input terminal. |
| 4 | FVR | I | FVR signal input terminal. |
| 5 | LCMP | I | LCMP signal input terminal. |
| 6 | COMPO1 | O | COMPO1 signal output terminal. |
| 7 | COMPP1 | O | COMPP1 signal output terminal. |
| 8 | COMPN1 | O | COMPN1 signal output terminal. |
| 9 | LRC | O | LRC signal output terminal. |
| 10 | VDD | – | +5V supply terminal. |
| 11 | VSS | – | Ground terminal. |
| 12 | HRC | O | HRC signal output terminal. |
| 13 | COMPN2 | O | COMPN2 signal output terminal. |
| 14 | COMPP2 | O | COMPP2 signal output terminal. |
| 15 | COMPO2 | O | COMPO2 signal output terminal. |
| 16 | HCMP | I | HCMP signal input terminal. |
| 17 | DLPF | I | DLPF signal input terminal. |
| 18 | VLPF | I | VLPF signal input terminal. |
| 19 | HLPF | I | HLPF signal input terminal. |
| 20 | VCXO | O | VCXO signal output terminal. |
| 21 | VCO | O | VCO signal output terminal. |
| 22 | DPCO | O | DPCO signal output terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 23 | VPCO | O | VPCO signal input terminal. |
| 24 | HPCO | O | HPCO signal input terminal. |
| 25 | MVPC | I | MVPC signal input terminal. |
| 26 | VC1 | O | VC1 signal input terminal. |
| 27 | COIN | I | COIN signal input terminal. |
| 28 | COOUT | O | COOUT signal output terminal. |
| 29 | CLKO | O | CLKO signal output terminal. |
| 30 | VSS | – | Ground terminal. |
| 31 | VDD | – | +5V supply terminal. |
| 32 | VC2 | O | VC2 signal input terminal. |
| 33 | CXIN | I | CXIN signal input terminal. |
| 34 | CXOUT | O | CXOUT signal output terminal. |
| 35 | TESTA | I | TESTA signal input terminal. |
| 36 | TESTB | I | TESTB signal input terminal. |
| 37 | TESTC | I | TESTC signal input terminal. |
| 38 | M1 | I/O | M1 signal in/out terminal. |
| 39 | M2 | I/O | M2 signal in/out terminal. |
| 40 | M3 | I/O | M3 signal in/out terminal. |
| 41 | CW | I | CW signal input terminal. |
| 42 | VDFD | I | VDFD signal input terminal. |
| 43 | LLDET | I | LLDET signal input terminal. |
| 44 | FVD | O | FVD signal output terminal. |
| 45 | FWHD | O | FWHD signal output terminal. |
| 46 | FBLK | O | FBLK signal output terminal. |
| 47 | VD | O | VD signal output terminal. |
| 48 | CP2 | O | CP2 signal output terminal. |
| 49 | BF | O | BF signal output terminal. |
| 50 | VSS | – | Ground terminal. |
| 51 | RBLK | I | RBLK signal input terminal. |
| 52 | PWHD | I | PWHD signal input terminal. |
| 53 | WHD | O | WHD signal output terminal. |
| 54 | CBLK | O | CBLK signal output terminal. |
| 55 | CSYNC | O | CSYNC signal output terminal. |
| 56 | PS0 | I | PS0 signal output terminal. |
| 57 | PS1 | I | PS1 signal output terminal. |
| 58 | PS2 | I | PS2 signal output terminal. |
| 59 | PS3 | I | PS3 signal output terminal. |
| 60 | LP | I | LP signal output terminal. |
| 61 | GLSYNC | I | GLSYNC signal output terminal. |
| 62 | GLVD | I | GLVD signal input terminal. |
| 63 | VD2 | I | VD2 signal input terminal. |
| 64 | NP | I | NTSC/PAL switching signal input terminal.<br>H = NTSC<br>L = PAL |
| 65 | MCONT | I | MCONT signal input terminal. |
| 66 | MS | I | MS signal input terminal. |
| 67 | CLR | I | CLR signal output terminal. |
| 68 | GLBSC | I | GLBSC signal output terminal. |
| 69 | BSD | I | BSD signal output terminal. |
| 70 | VDD | – | +5V supply terminal. |
| 71 | VSS | – | Ground terminal. |
| 72 | SCIN | I | SCIN signal input terminal. |
| 73 | SCOUT | O | SCOUT signal output terminal. |
| 74 | SCBO | O | SCBO signal output terminal. |
| 75 | SCRO | O | SCRO signal output terminal. |
| 76 | SCP0 | I | SCP0 signal input terminal. |
| 77 | SCP1 | I | SCP1 signal input terminal. |
| 78 | SPCO | O | SPCO signal output terminal. |
| 79 | SCMP | I | SCMP signal output terminal. |
| 80 | SRC | O | SRC signal output terminal. |

**23.** IC5 on the Preamp/Encoder Board, IC102, IC202 and IC302 on the Preprocess Board, IC1 on the Rear Board are using the Triple 2-ch Analog Multiplexer/ Demultiplexer IC YWUPD4053BG.
Description of this IC is as follows:



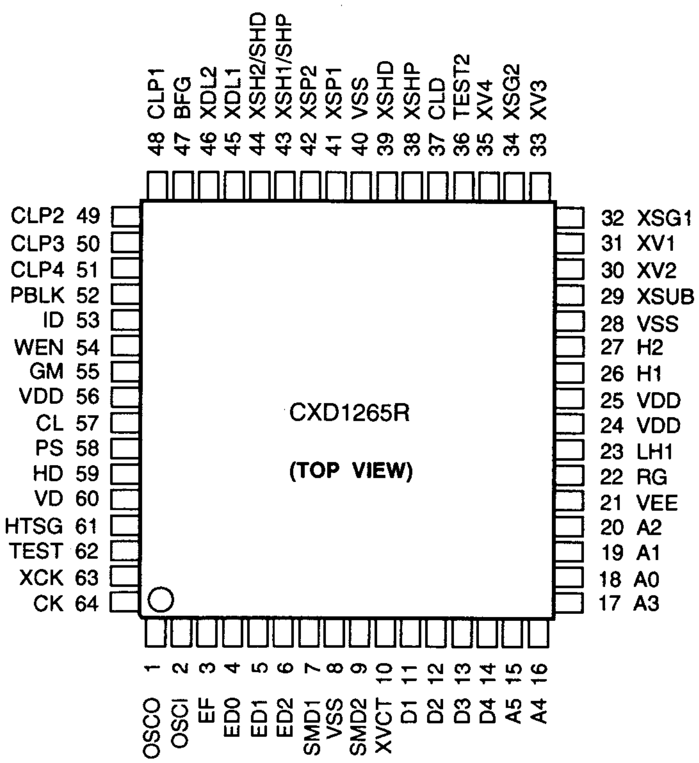
**(TOP VIEW)**

**Truth Table**

| INHIBIT | C | B | A | X COMMON | Y COMMON | Z COMMON |
|---|---|---|---|---|---|---|
| L | L | L | L | 0X | 0Y | 0Z |
| L | L | L | H | 1X | 0Y | 0Z |
| L | L | H | L | 0X | 1Y | 0Z |
| L | L | H | H | 1X | 1Y | 0Z |
| L | H | L | L | 0X | 0Y | 1Z |
| L | H | L | H | 1X | 0Y | 1Z |
| L | H | H | L | 0X | 1Y | 1Z |
| L | H | H | H | 1X | 1Y | 1Z |
| H | * | * | * | NONE | NONE | NONE |

* : Don't care.

**24.** IC9 on the Drive Board is using the Timing Generator IC YWCXD1265R.
Description of this IC is as follows:

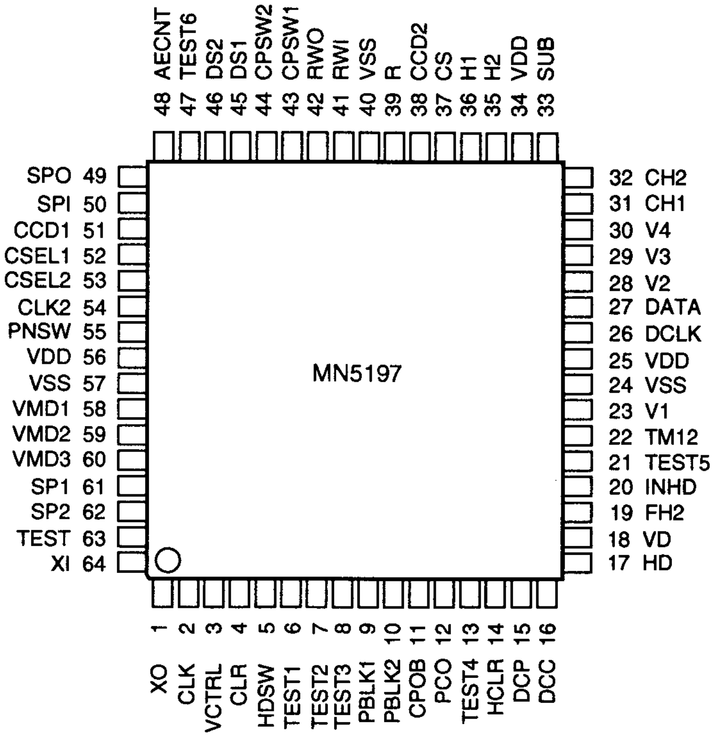

CXD1265R
(TOP VIEW)
1 OSCO
2 OSCI
3 EF
4 ED0
5 ED1
6 ED2
7 SMD1
8 VSS
9 SMD2
10 XVCT
11 D1
12 D2
13 D3
14 D4
15 A5
16 A4
17 A3
18 A0
19 A1
20 A2
21 VEE
22 RG
23 LH1
24 VDD
25 VDD
26 H1
27 H2
28 VSS
29 XSUB
30 XV2
31 XV1
32 XSG1
33 XV3
34 XSG2
35 XV4
36 TEST2
37 CLD
38 XSHP
39 XSHD
40 VSS
41 XSP1
42 XSP2
43 XSH1/SHP
44 XSH2/SHD
45 XDL1
46 XDL2
47 BFG
48 CLP1
49 CLP2
50 CLP3
51 CLP4
52 PBLK
53 ID
54 WEN
55 GM
56 VDD
57 CL
58 PS
59 HD
60 VD
61 HTSG
62 TEST
63 XCK
64 CK

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | OSCO | O | Oscillation Inverter output terminal. |
| 2 | OSCI | I | Oscillation Inverter input terminal. |
| 3 | EF | I | Error Correction System Selecting signal input terminal.<br>H = External ROM<br>L = Serial signal from microprocessor |
| 4 | ED0 | I | Shutter Speed Set signal input terminal.<br>Strobe input terminal when Serial mode. |
| 5 | ED1 | I | Shutter Speed Set signal input terminal.<br>Clock input terminal when Serial mode. |
| 6 | ED2 | I | Shutter Speed Set signal input terminal.<br>Data input terminal when Serial mode. |
| 7 | SMD1 | I | Shutter Mode Set signal input terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 8 | VSS | – | Ground terminal. |
| 9 | SMD2 | I | Shutter Mode Set signal input terminal. |
| 10 | XVCT | O | Power Control signal output terminal for external ROM. |
| 11 | D1 | I | Data input terminal when using external ROM.<br>Not using external ROM;<br>L = without Error Correction<br>H = with Error Correction |
| 12 | D2 | I | Data input terminal when using external ROM.<br>Not using external ROM;<br>L = Color<br>H = Black and White |
| 13 | D3 | I | Data input terminal when using external ROM.<br>Not using external ROM;<br>fixed at Low. |
| 14 | D4 | I | Data input terminal when using external ROM.<br>Not using external ROM;<br>L = NTSC<br>H = PAL |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 15 | A5 | O | Address output terminal for external ROM. |
| 16 | A4 | O | Address output terminal for external ROM. |
| 17 | A3 | O | Address output terminal for external ROM. |
| 18 | A0 | O | Address output terminal for external ROM. |
| 19 | A0 | O | Address output terminal for external ROM. |
| 20 | A0 | O | Address output terminal for external ROM. |
| 21 | VEE | – | Ground terminal. |
| 22 | RG | O | Reset Gate signal output terminal. |
| 23 | LH1 | O | Clock output terminal for last stage of CCD Horizontal Register. |
| 24 | VDD | – | Power supply terminal. |
| 25 | VDD | – | Power supply terminal for H1 and H2 circuits. |
| 26 | H1 | O | Clock output terminal for CCD Horizontal Register Drive. |
| 27 | H2 | O | Clock output terminal for CCD Horizontal Register Drive. |
| 28 | Vss | – | Ground terminal for H1 and H2 circuit. |
| 29 | XSUB | O | CCD Charge Clear Pulse output terminal. |
| 30 | XV2 | O | Clock output terminal for CCD Vertical Register Drive. |
| 31 | XV1 | O | Clock output terminal for CCD Vertical Register Drive. |
| 32 | XSG1 | O | CCD Sensor Charge Read Out Pulse output terminal. |
| 33 | XV3 | O | Clock output terminal for CCD Vertical Register Drive. |
| 34 | XSG2 | O | CCD Sensor Charge Read Out Pulse output terminal. |
| 35 | XV4 | O | Clock output terminal for CCD Vertical Register Drive. |
| 36 | TEST2 | I | Test input terminal; Normally fixed at Low. |
| 37 | CLD | O | 4fsc Clock output terminal. |
| 38 | XSHP | O | Pre-Charge Level Sample and Hold Pulse output terminal. |
| 39 | XSHD | O | Data Sample and Hold Pulse output terminal. |
| 40 | Vss | – | Ground terminal. |
| 41 | XSP1 | O | Chroma Separation Sample and Hold Pulse output terminal.<br>Stop at Black and White mode. |
| 42 | XSP2 | O | Chroma Separation Sample and Hold Pulse output terminal.<br>Stop at Black and White mode. |
| 43 | XSH1/ SHP | O | Switching Sample and Hold Pulse/Pre-Charge Level Sample and Hold Pulse (Black and White mode) output terminal. |
| 44 | XSH2/ SHP | O | Switching Sample and Hold Pulse/Pre-Charge Level Sample and Hold Pulse (Black and White mode) output terminal. |
| 45 | XDL1 | O | Clock output terminal for Delay Line.<br>Stop at Black and White mode. |
| 46 | XDL2 | O | Clock output terminal for Delay Line.<br>Stop at Black and White mode. |
| 47 | BFG | O | Encoder Chroma Modulator Pulse output terminal.<br>Error Position Pointer Pulse when GM = High.<br>Stop at Black and White mode. |
| 48 | CLP1 | O | Clamp signal output terminal. |
| 49 | CLP2 | I/O | Clamp signal output terminal.<br>Standby Mode Switching signal input terminal when GM = High. |
| 50 | CLP3 | I/O | Clamp signal output terminal.<br>Standby Mode Switching signal input terminal when GM = High. |
| 51 | CLP4 | O | Clamp signal output terminal. |
| 52 | PBLK | O | Pre-Blanking Pulse output terminal. |
| 53 | ID | O | Line Identification signal output terminal. |
| 54 | WEN | O | Write Enable signal output terminal (only when slow speed shutter). |
| 55 | GM | I | H = Digital Signal Process<br>L = Analog Signal Process |
| 56 | VDD | – | Power supply terminal. |
| 57 | CL | O | 4fsc Clock output terminal. |
| 58 | PS | I | Electronic Shutter Speed mode switching signal input terminal.<br>H = Parallel Input<br>L = Serial Input |
| 59 | HD | I | Horizontal Sync signal input terminal. |
| 60 | VD | I | Vertical Sync signal input terminal. |
| 61 | HTSG | I | XSG1, 2 Control signal input terminal.<br>H = XSG1, 2 generate<br>L = XSG1, 2 stop |
| 62 | TEST | I | Test signal input terminal. |
| 63 | XCK | O | 8fsc Clock output terminal. |
| 64 | CK | I | 8fsc Clock input terminal. |

**25.** IC3 on the Drive Board is using the 1/3" 510/670/768H CCD Driver with Phase Comparator IC MN5197.
Description of this IC is as follows:


48 AECNT
47 TEST6
46 DS2
45 DS1
44 CPSW2
43 CPSW1
42 RWO
41 RWI
40 VSS
39 R
38 CCD2
37 CS
36 H1
35 H2
34 VDD
33 SUB
SPO 49
SPI 50
CCD1 51
CSEL1 52
CSEL2 53
CLK2 54
PNSW 55
VDD 56
VSS 57
VMD1 58
VMD2 59
VMD3 60
SP1 61
SP2 62
TEST 63
XI 64
32 CH2
31 CH1
30 V4
29 V3
28 V2
27 DATA
26 DCLK
25 VDD
24 VSS
23 V1
22 TM12
21 TEST5
20 INHD
19 FH2
18 VD
17 HD
MN5197
1 XO
2 CLK
3 VCTRL
4 CLR
5 HDSW
6 TEST1
7 TEST2
8 TEST3
9 PBLK1
10 PBLK2
11 CPOB
12 PCO
13 TEST4
14 HCLR
15 DCP
16 DCC

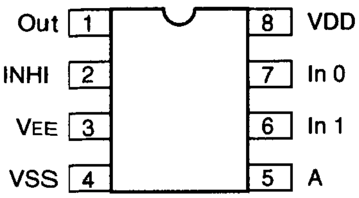
**(TOP VIEW)**

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | XO | O | Oscillator output terminal. |
| 2 | CLK | O | CLK signal output terminal. |
| 3 | VCTRL | I | VCTRL signal input terminal. |
| 4 | CLR | I | CLR signal input terminal. |
| 5 | HDSW | I | HDSW signal input terminal. |
| 6 | TEST1 | I | Test terminal. |
| 7 | TEST2 | I | Test terminal. |
| 8 | TEST3 | I | Test terminal. |
| 9 | PBLK1 | O | PBLK1 signal output terminal. |
| 10 | PBLK2 | O | PBLK2 signal output terminal. |
| 11 | CPOB | O | CPOB signal output terminal. |
| 12 | PCO | O | PCO signal output terminal. |
| 13 | TEST4 | I | Test terminal. |
| 14 | HCLR | O | HCLR signal output terminal. |
| 15 | DCP | O | DCP signal output terminal. |
| 16 | DCC | O | DCC signal output terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 17 | HD | I | HD signal input terminal. |
| 18 | VD | I | VD signal input terminal. |
| 19 | FH2 | O | FH2 signal output terminal. |
| 20 | INHD | O | INHD signal output terminal. |
| 21 | TEST5 | I | Test terminal. |
| 22 | TM12 | I | TM12 signal input terminal. |
| 23 | V1 | O | V1 signal output terminal. |
| 24 | VSS | – | Ground terminal. |
| 25 | VDD | – | Power supply terminal |
| 26 | DCLK | I | DCLK signal input terminal. |
| 27 | DATA | I | DATA input terminal. |
| 28 | V2 | O | V2 signal output terminal. |
| 29 | V3 | O | V3 signal output terminal. |
| 30 | V4 | O | V4 signal output terminal. |
| 31 | CH1 | O | CH1 signal output terminal. |
| 32 | CH2 | O | CH2 signal output terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 33 | SUB | O | SUB signal output terminal. |
| 34 | VDD | – | Power supply terminal. |
| 35 | H1 | O | H1 signal output terminal. |
| 36 | H2 | O | H2 signal output terminal. |
| 37 | CS | I | CS signal input terminal. |
| 38 | CCD2 | I | CCD2 signal input terminal. |
| 39 | R | O | R signal output terminal. |
| 40 | VSS | – | Ground terminal. |
| 41 | RWI | I | RWI signal input terminal. |
| 42 | RWO | O | RWO signal output terminal. |
| 43 | CPSW1 | I | CPSW1 signal input terminal. |
| 44 | CPSW2 | I | CPSW2 signal input terminal. |
| 45 | DS1 | O | DS1 signal output terminal. |
| 46 | DS2 | O | DS2 signal output terminal. |
| 47 | TEST6 | I | Test terminal. |
| 48 | AECNT | I | AECNT signal input terminal. |
| 49 | SPO | O | SPO signal output terminal. |
| 50 | SPI | I | SPI signal input terminal. |
| 51 | CCD1 | I | CCD1 signal input terminal. |
| 52 | CSEL1 | I | CSEL1 signal input terminal. |
| 53 | CSEL2 | I | CSEL2 signal input terminal. |
| 54 | CLK2 | O | CLK2 signal output terminal. |
| 55 | PNSW | I | PNSW signal input terminal. |
| 56 | VDD | – | Power supply terminal. |
| 57 | VSS | – | Ground terminal. |
| 58 | VMD1 | I | VMD1 signal input terminal. |
| 59 | VMD2 | I | VMD2 signal input terminal. |
| 60 | VMD3 | I | VMD3 signal input terminal. |
| 61 | SP1 | O | SP1 signal output terminal. |
| 62 | SP2 | O | SP2 signal output terminal. |
| 63 | TEST | I | Test terminal. |
| 64 | XI | I | Oscillator input terminal. |

**26.** IC11 on the Preamp/Encoder Board, IC7, IC104, IC105, IC204, IC205, IC304 and IC305 on the Preprocess Board are using the Single Analog Multiplexer/Demultiplexer IC YWTC4W53FL.
Description of this IC is as follows:


Out 1
INHI 2
VEE 3
VSS 4
8 VDD
7 In 0
6 In 1
5 A

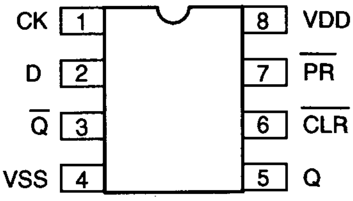
**(TOP VIEW)**

**Truth Table**

| INPUTS | | OUT |
|---|---|---|
| INHI | A | |
| L | L | IN 0 |
| L | H | IN 1 |
| H | * | None |

*: Don't Care.

**27.** IC18 on the Drive Board is using the Single D-FF with Preset and Clear IC YWTC7W74F.
Description of this IC is as follows:


CK 1
D 2
$\overline{Q}$ 3
VSS 4
8 VDD
7 $\overline{PR}$
6 $\overline{CLR}$
5 Q

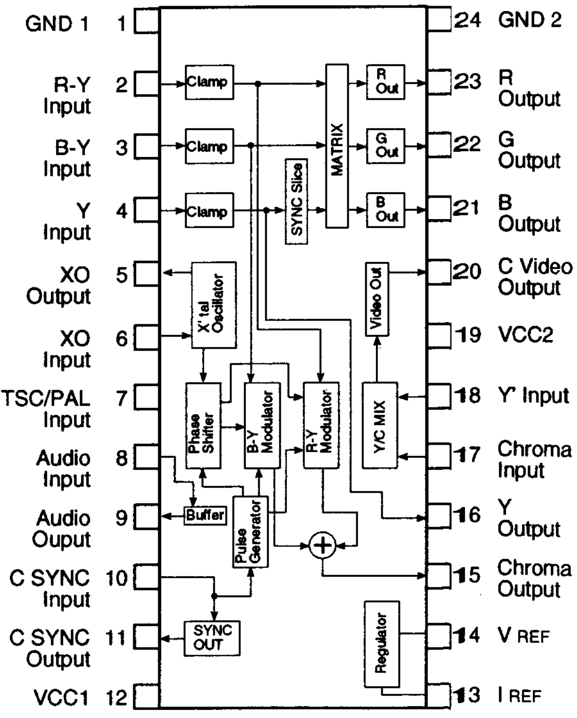
**(TOP VIEW)**

**Truth Table**

| INPUTS | | | | OUTPUTS | | Function |
|---|---|---|---|---|---|---|
| $\overline{CLR}$ | $\overline{PR}$ | D | CK | Q | $\overline{Q}$ | |
| L | H | * | * | L | H | Clear |
| H | L | * | * | H | L | Preset |
| L | L | * | * | H | H | —— |
| H | H | L | ↑ | L | H | —— |
| H | H | H | ↑ | H | L | —— |
| H | H | * | ↓ | Qn | $\overline{Qn}$ | No Change |

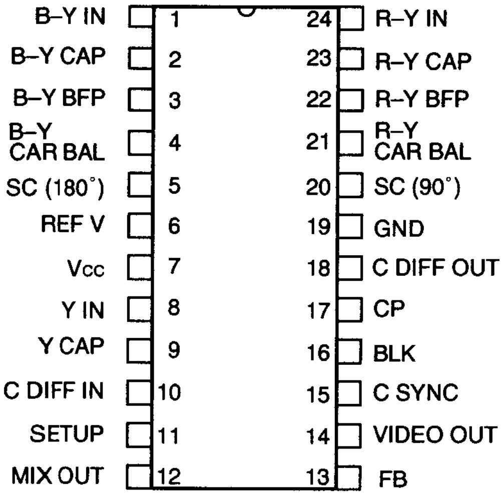
* : Don't care.

**28.** IC6 on the Encoder Board is using the Video Encoder IC YWCXA1229M.
Description of this IC is as follows:

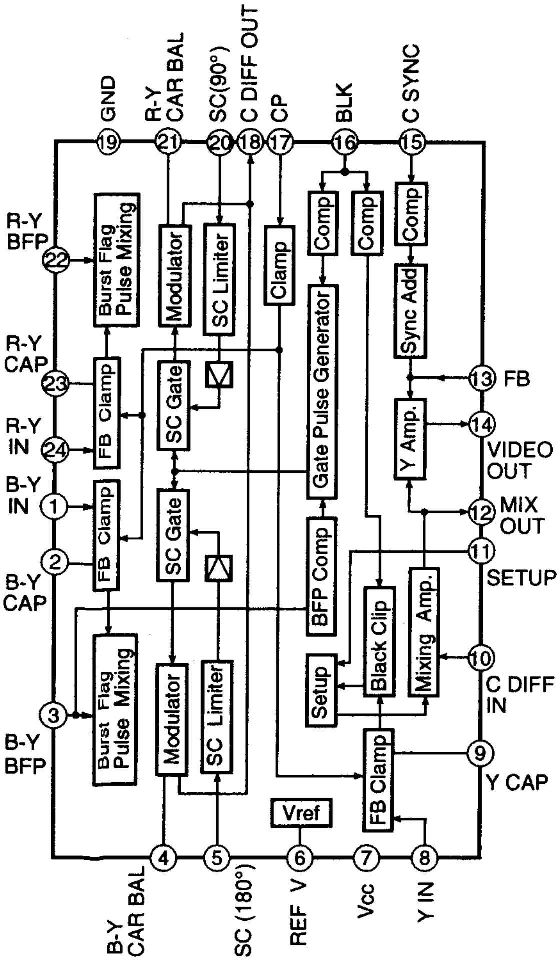

GND 1 1
R-Y Input 2
B-Y Input 3
Y Input 4
XO Output 5
XO Input 6
NTSC/PAL Input 7
Audio Input 8
Audio Ouput 9
C SYNC Input 10
C SYNC Output 11
VCC1 12
24 GND 2
23 R Output
22 G Output
21 B Output
20 C Video Output
19 VCC2
18 Y' Input
17 Chroma Input
16 Y Output
15 Chroma Output
14 V REF
13 I REF
Clamp
Clamp
Clamp
MATRIX
R Out
G Out
B Out
SYNC Slice
X'tal Oscillator
Video Out
Phase Shifter
B-Y Modulator
R-Y Modulator
Y/C MIX
Buffer
Pulse Generator
SYNC OUT
Regulator

**(TOP VIEW)**

**29.** IC3 on the Preamp/Encoder Board is using the Chroma Difference Signal Encoder IC YWM51272FP.
Description of this IC is as follows:

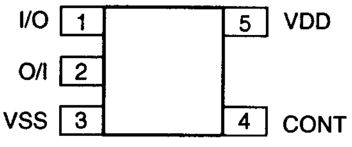

B–Y IN 1
B–Y CAP 2
B–Y BFP 3
B–Y CAR BAL 4
SC (180°) 5
REF V 6
Vcc 7
Y IN 8
Y CAP 9
C DIFF IN 10
SETUP 11
MIX OUT 12
24 R–Y IN
23 R–Y CAP
22 R–Y BFP
21 R–Y CAR BAL
20 SC (90°)
19 GND
18 C DIFF OUT
17 CP
16 BLK
15 C SYNC
14 VIDEO OUT
13 FB

(TOP VIEW)


GND
R-Y CAR BAL
SC(90°)
C DIFF OUT
CP
BLK
C SYNC
19
21
20
18
17
16
15
R-Y BFP 22
R-Y CAP 23
R-Y IN 24
B-Y IN 1
B-Y CAP 2
B-Y BFP 3
Burst Flag Pulse Mixing
Modulator
SC Limiter
Clamp
Comp
Comp
Comp
Gate Pulse Generator
Sync Add
FB Clamp
SC Gate
FB Clamp
SC Gate
13 FB
Y Amp.
14 VIDEO OUT
12 MIX OUT
11 SETUP
BFP Comp
Black Clip
Mixing Amp.
10 C DIFF IN
Setup
Burst Flag Pulse Mixing
Modulator
SC Limiter
FB Clamp
9 Y CAP
Vref
4
5
6
7
8
B-Y CAR BAL
SC (180°)
REF V
Vcc
Y IN

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | B–Y IN | I | B–Y signal input terminal. |
| 2 | B–Y CAP | – | B–Y Clamp Capacitor connecting terminal. |
| 3 | B–Y BFP | I | B–Y Burst Flag Pulse input terminal. |
| 4 | B–Y CAR BAL | I | B–Y Carrier Balance adjusting terminal. |
| 5 | SC(180°) | I | Subcarrier (180°) input terminal. |
| 6 | REF V | – | Reference Voltage terminal. |
| 7 | VCC | – | +5V Supply terminal. |
| 8 | Y IN | I | Y signal input terminal. |
| 9 | Y CAP | – | Y signal Clamp Capacitor connecting terminal. |
| 10 | C DIFF IN | I | Chroma Difference signal output terminal. |
| 11 | SETUP | I | Setup Level input terminal. |
| 12 | MIX OUT | O | Mixing Amp. signal output terminal. |
| 13 | FB | I | Video Amp. Feedback terminal. |
| 14 | VIDEO OUT | O | Video signal output terminal. |
| 15 | C SYNC | I | Composite Sync signal input terminal. |
| 16 | BLK | I | Blanking signal input terminal. |
| 17 | CP | I | Clamp Pulse input terminal. |
| 18 | C DIFF OUT | O | Chroma Difference signal output terminal. |
| 19 | GND | – | Ground terminal. |
| 20 | SC(90°) | I | Subcarrier (90°) input terminal. |
| 21 | R–Y CAR BAL | I | R–Y Carrier Balance adjusting terminal. |
| 22 | R–Y BFP | I | R–Y Burst Flag Pulse input terminal. |
| 23 | R–Y CAP | – | R–Y signal Clamp Capactor connecting terminal. |
| 24 | R–Y IN | I | R–Y signal input terminal |

**30.** IC5 and IC6 on the Mother Board are using the Single Analog Switch/Multiplexer/Demultiplexer IC TC4S66 FR.
Description of this IC is as follows:

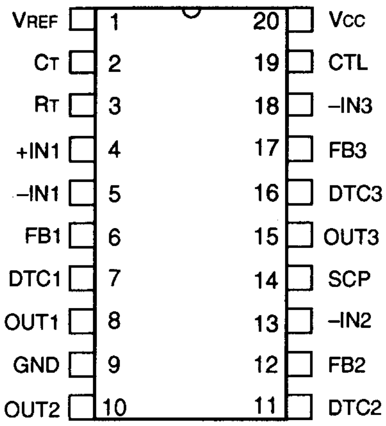

I/O 1
O/I 2
VSS 3
5 VDD
4 CONT

(TOP VIEW)

**Truth Table**

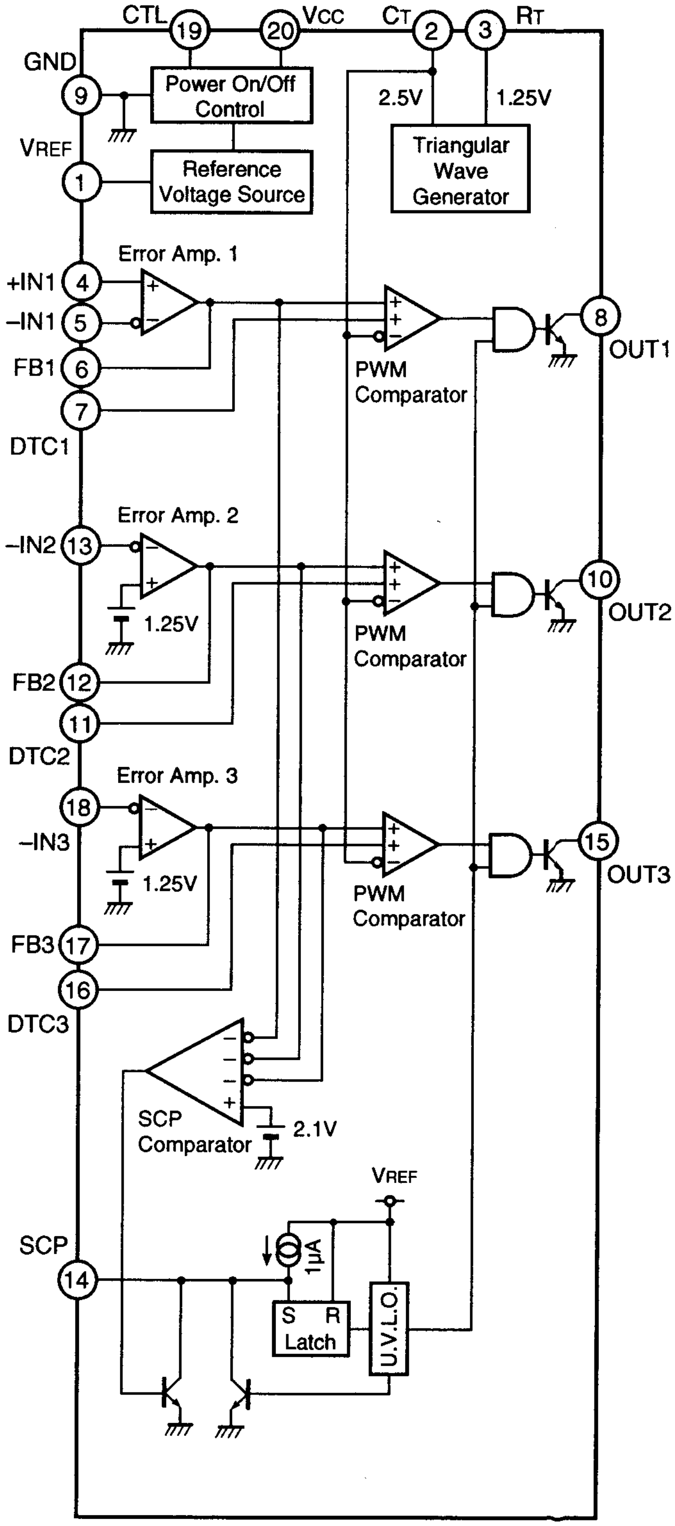
| Input | Switch |
|---|---|
| Control | I/O — O/I |
| L | OFF |
| H | ON |

**31.** IC1 and IC2 on the Power Board is using the Switching Regulator IC YWMB3782PF.
Description of this IC is as follows.


VREF 1
CT 2
RT 3
+IN1 4
-IN1 5
FB1 6
DTC1 7
OUT1 8
GND 9
OUT2 10
20 VCC
19 CTL
18 -IN3
17 FB3
16 DTC3
15 OUT3
14 SCP
13 -IN2
12 FB2
11 DTC2

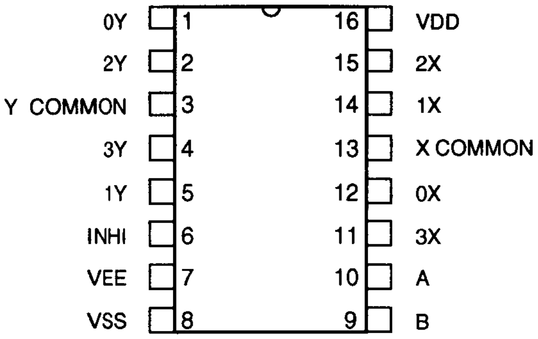
(TOP VIEW)

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | VREF | O | Reference Voltage output terminal (2.50V typical). |
| 2 | CT | – | Timing capacitor connecting terminal. |
| 3 | RT | – | Timing resistor connecting terminal. |
| 4 | +IN1 | I | Non-invereting input terminal for Error Amp. 1. |
| 5 | –IN1 | I | Invereting input terminal for Error Amp. 1. |
| 6 | FB1 | – | Feedback terminal for Error Amp. 1. |
| 7 | DTC1 | I | Dead Time Control 1 signal input terminal. |
| 8 | OUT1 | O | Open Collector output terminal 1 (50mA maximum). |
| 9 | GND | – | Ground terminal. |
| 10 | OUT2 | O | Open Collector output terminal 2 (50mA maximum). |
| 11 | DTC2 | I | Dead Time Control 2 signal input terminal. |
| 12 | FB2 | – | Feedback terminal for Error Amp. 2. |
| 13 | –IN2 | I | Invereting input terminal for Error Amp. 2. |
| 14 | SCP | – | Short Circuit Protection terminal. |
| 15 | OUT3 | O | Open Collector output terminal 3 (50mA maximum). |
| 16 | DTC3 | I | Dead Time Control 3 signal input terminal. |
| 17 | FB3 | – | Feedback terminal for Error Amp. 3. |
| 18 | –IN3 | I | Invereting input terminal for Error Amp. 3. |
| 19 | CTL | I | Power Control terminal. |
| 20 | VCC | – | Power Supply terminal. |


CTL 19
20 VCC
CT 2
3 RT
GND 9
VREF 1
Power On/Off Control
Reference Voltage Source
2.5V
1.25V
Triangular Wave Generator
Error Amp. 1
+IN1 4
-IN1 5
FB1 6
7 DTC1
PWM Comparator
8 OUT1
Error Amp. 2
-IN2 13
1.25V
FB2 12
11 DTC2
10 OUT2
Error Amp. 3
18 -IN3
1.25V
FB3 17
16 DTC3
15 OUT3
SCP Comparator
2.1V
VREF
SCP 14
1μA
S R Latch
U.V.L.O.

**32.** IC8 on the Preamp/Encoder Board is using the Dual 4-ch Analog Multiplexers/Demultiplexers IC YWUPD4052 BG.

Description of this IC is as follows:


0Y
2Y
Y COMMON
3Y
1Y
INHI
VEE
VSS
1
2
3
4
5
6
7
8
16
15
14
13
12
11
10
9
VDD
2X
1X
X COMMON
0X
3X
A
B

**(TOP VIEW)**

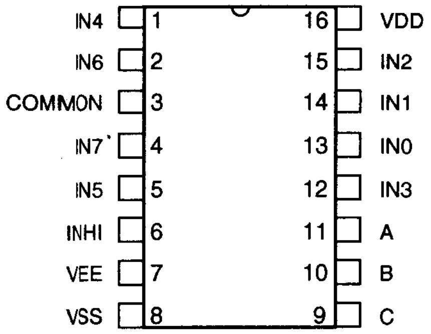
**Truth Table**

| INHIBIT | B | A | X COMMON | Y COMMON |
|---|---|---|---|---|
| L | L | L | 0X | 0Y |
| L | L | H | 1X | 1Y |
| L | H | L | 2X | 2Y |
| L | H | H | 3X | 3Y |
| H | * | * | NONE | NONE |

* : Don't care.

**33.** IC1 on the Mother Board is using the Single 8-ch Analog Multiplexer/Demultiplexer IC YWUPD4051BG.

Description of this IC is as follows:


IN4
IN6
COMMON
IN7
IN5
INHI
VEE
VSS
1
2
3
4
5
6
7
8
16
15
14
13
12
11
10
9
VDD
IN2
IN1
IN0
IN3
A
B
C

**(TOP VIEW)**

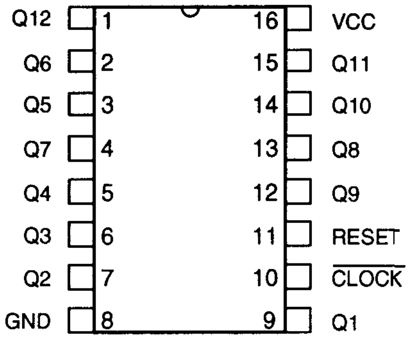
**Truth Table**

| INHIBIT | C | B | A | COMMON |
|---|---|---|---|---|
| L | L | L | L | IN0 |
| L | L | L | H | IN1 |
| L | L | H | L | IN2 |
| L | L | H | H | IN3 |
| L | H | L | L | IN4 |
| L | H | L | H | IN5 |
| L | H | H | L | IN6 |
| L | H | H | H | IN7 |
| H | * | * | * | NONE |

* : Don't care.

**34.** IC9 on the Mother Board is using the 12-stage Binary Ripple Counter IC MC74HC4040F.

Description of this IC is as follows:


Q12
Q6
Q5
Q7
Q4
Q3
Q2
GND
1
2
3
4
5
6
7
8
16
15
14
13
12
11
10
9
VCC
Q11
Q10
Q8
Q9
RESET
CLOCK
Q1

**(TOP VIEW)**

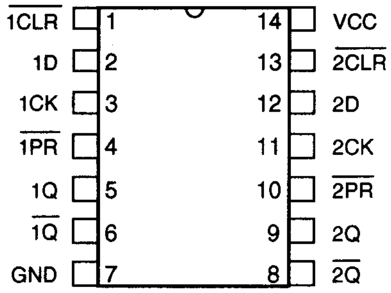
**Truth Table**

| $\overline{\text{CLOCK}}$ | RESET | Qn OUTPUT |
|---|---|---|
| * | H | L |
| ↑ | L | Don't Count |
| ↓ | L | Binary Count |

* : Don't care.

**35.** IC11 on the Mother Board is using the Dual D-FFs with Preset and Clear IC YWMC74HC74AF.

Description of this IC is as follows:


1CLR
1D
1CK
1PR
1Q
1Q
GND
1
2
3
4
5
6
7
14
13
12
11
10
9
8
VCC
2CLR
2D
2CK
2PR
2Q
2Q

**(TOP VIEW)**

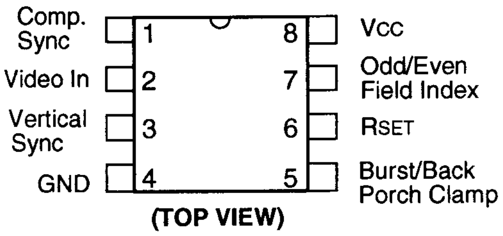
**Truth Table**

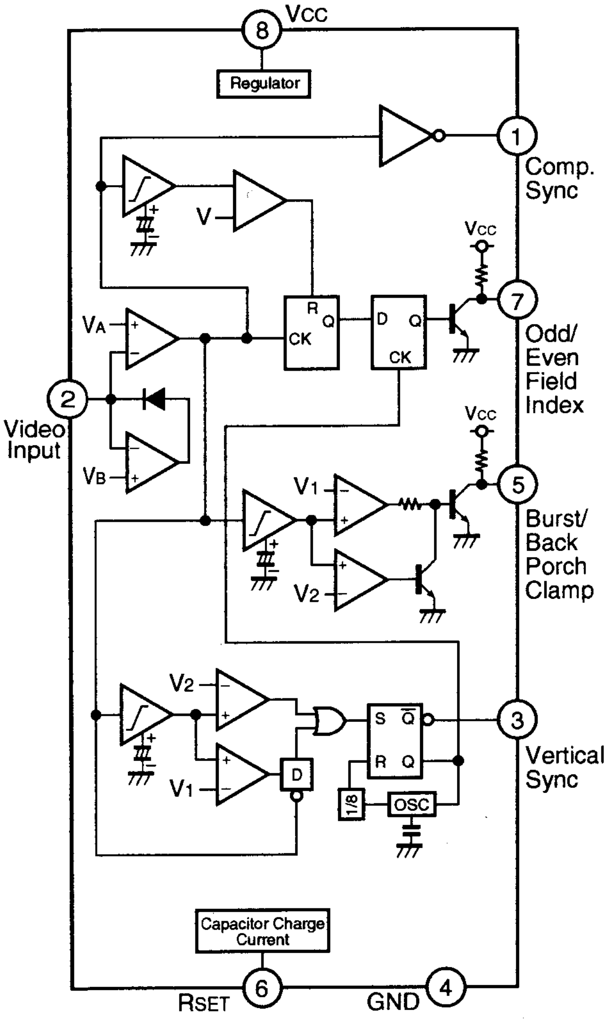
| INPUTS | | | | OUTPUTS | | Function |
|---|---|---|---|---|---|---|
| $\overline{\text{CLR}}$ | $\overline{\text{PR}}$ | D | CK | Q | $\overline{\text{Q}}$ | |
| L | H | * | * | L | H | Clear |
| H | L | * | * | H | L | Preset |
| L | L | * | * | H | H | — |
| H | H | L | ↑ | L | H | — |
| H | H | H | ↑ | H | L | — |
| H | H | * | ↓ | Qn | $\overline{\text{Qn}}$ | No Change |

* : Don't care.

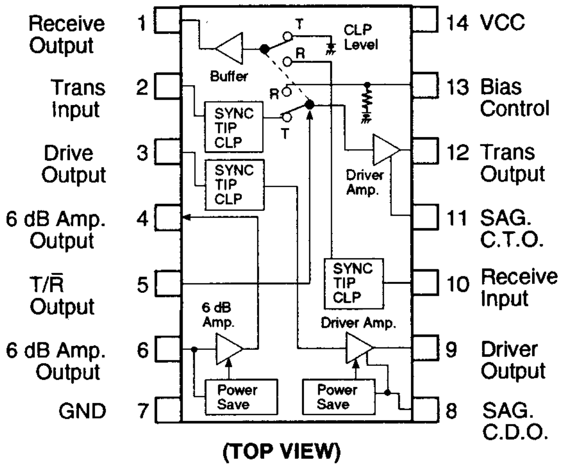
# IC Description (WV-PS550)

1. IC3 on the Demodulator Board and IC2 on the Modulator Board are using the Sync Separator IC YWLM1881M.
   Description of this IC is as follows:

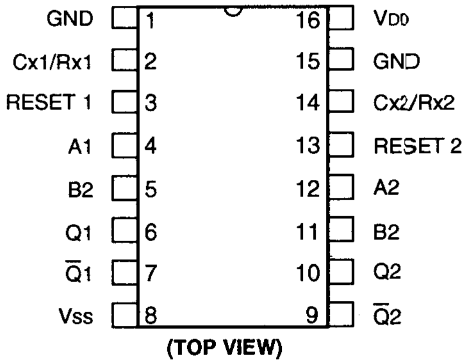

Comp. Sync 1
Video In 2
Vertical Sync 3
GND 4
8 Vcc
7 Odd/Even Field Index
6 RSET
5 Burst/Back Porch Clamp
(TOP VIEW)


8 Vcc
Regulator
1 Comp. Sync
V-
Vcc
R Q CK
D Q CK
7 Odd/ Even Field Index
VA
2 Video Input
VB
Vcc
V1
5 Burst/ Back Porch Clamp
V2
V2
V1
S Q̄
R Q
D
1/8
OSC
3 Vertical Sync
Capacitor Charge Current
6 RSET
4 GND

2. IC4 on the Demodulator Board is using the Video Signal Interface IC YWCX20095A.
   Description of this IC is as follows:


Receive Output 1
Trans Input 2
Drive Output 3
6 dB Amp. Output 4
T/R̄ Output 5
6 dB Amp. Output 6
GND 7
14 VCC
13 Bias Control
12 Trans Output
11 SAG. C.T.O.
10 Receive Input
9 Driver Output
8 SAG. C.D.O.
Buffer
T
R
CLP Level
R
T
SYNC TIP CLP
SYNC TIP CLP
Driver Amp.
SYNC TIP CLP
6 dB Amp.
Driver Amp.
Power Save
Power Save
(TOP VIEW)

3. IC11 on the Demodulator Board, IC10 on the Modulator Board are using the Dual Precision Retriggerable Monostable Multivibrator IC YWUPD4538BG.
   Description of this IC is as follows:

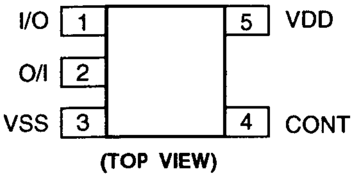

GND 1
Cx1/Rx1 2
RESET 1 3
A1 4
B2 5
Q1 6
Q̄1 7
Vss 8
16 VDD
15 GND
14 Cx2/Rx2
13 RESET 2
12 A2
11 B2
10 Q2
9 Q̄2
(TOP VIEW)

**Truth Table**

| INPUT | | | OUTPUT | | NOTE |
|---|---|---|---|---|---|
| A | B | RESET | Q | $\bar{Q}$ | |
| ↑ | H | H | ⊓ | ⊔ | Output Pulse |
| ↑ | L | H | L | H | Inhibit |
| H | ↓ | H | L | H | Inhibit |
| L | ↓ | H | ⊓ | ⊔ | Output Pulse |
| * | * | L | L | H | Inhibit |

* : Don't care.

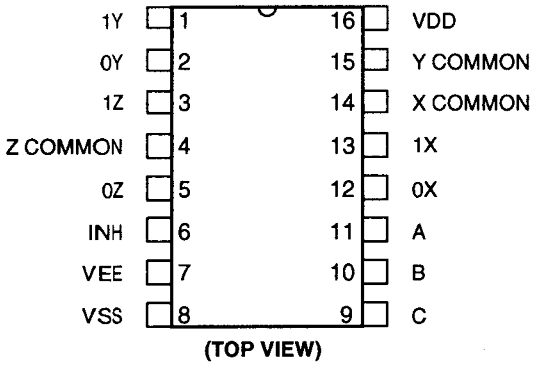
**4.** IC10 and IC16 on the Demodulator Board, IC4 and IC7 on the Modulator Board are using the Single Analog Switch/Multiplexer/Demultiplexer IC YWTC4S66FR.
Description of this IC is as follows:


I/O 1
O/I 2
VSS 3
5 VDD
4 CONT
(TOP VIEW)

**Truth Table**

| Input Control | Switch I/O – O/I |
|---|---|
| L | OFF |
| H | ON |

**5.** IC12 and IC14 on the Demodulator Board are using the Triple 2-ch Analog Multiplexers/Demultiplexers IC YWUPD4053BG.
Description of this IC is as follows:

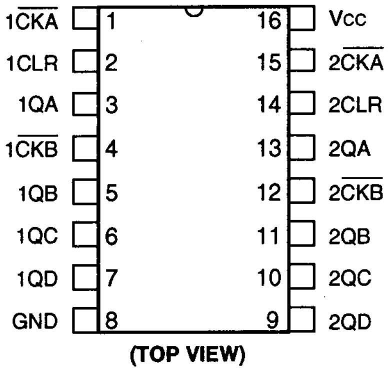

1Y 1
0Y 2
1Z 3
Z COMMON 4
0Z 5
INH 6
VEE 7
VSS 8
16 VDD
15 Y COMMON
14 X COMMON
13 1X
12 0X
11 A
10 B
9 C
(TOP VIEW)

**Truth Table**

| INHIBIT | C | B | A | X COMMON | Y COMMON | Z COMMON |
|---|---|---|---|---|---|---|
| L | L | L | L | 0X | 0Y | 0Z |
| L | L | L | H | 1X | 0Y | 0Z |
| L | L | H | L | 0X | 1Y | 0Z |
| L | L | H | H | 1X | 1Y | 0Z |
| L | H | L | L | 0X | 0Y | 1Z |
| L | H | L | H | 1X | 0Y | 1Z |
| L | H | H | L | 0X | 1Y | 1Z |
| L | H | H | H | 1X | 1Y | 1Z |
| H | * | * | * | NONE | NONE | NONE |

* : Don't care.

**6.** IC9 on the Modulator Board are using the Dual Decade Counter IC UPD74HC390G.
Description of this IC is as follows:

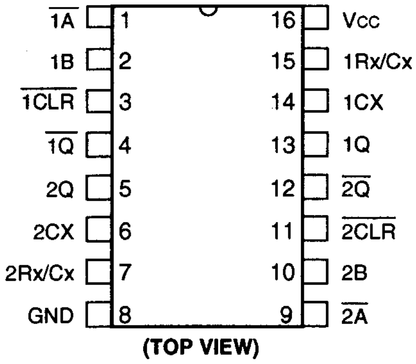

1$\overline{CKA}$ 1
1CLR 2
1QA 3
1$\overline{CKB}$ 4
1QB 5
1QC 6
1QD 7
GND 8
16 Vcc
15 2$\overline{CKA}$
14 2CLR
13 2QA
12 2$\overline{CKB}$
11 2QB
10 2QC
9 2QD
(TOP VIEW)

**Truth Table**

| INPUTS | | | OUTPUTS | | | |
|---|---|---|---|---|---|---|
| $\overline{CKA}$ | $\overline{CKB}$ | CLR | QA | QB | QC | QD |
| * | * | H | L | L | L | L |
| ↓ | * | L | Binary Count up | | | |
| * | ↓ | L | Quinary Count up | | | |

* : Don't care.

**7.** IC13 and IC14 on the Modulator Board are using the Dual Monostable Multivibrator IC UPD74HC221AG.
Description of this IC is as follows:


$\overline{1A}$ 1
1B 2
$\overline{1CLR}$ 3
$\overline{1Q}$ 4
2Q 5
2CX 6
2Rx/Cx 7
GND 8
16 Vcc
15 1Rx/Cx
14 1CX
13 1Q
12 $\overline{2Q}$
11 $\overline{2CLR}$
10 2B
9 $\overline{2A}$
(TOP VIEW)

**Truth Table**

| INPUTS | | | OUTPUTS | | NOTE |
|---|---|---|---|---|---|
| $\overline{A}$ | B | $\overline{CLR}$ | Q | $\overline{Q}$ | |
| ↓ | H | H | ⊓ | ⊔ | Output Pulse |
| * | L | H | L | H | Inhibit |
| H | * | H | L | H | Inhibit |
| L | ↑ | H | ⊓ | ⊔ | Output Pulse |
| L | H | ↑ | ⊓ | ⊔ | Output Pulse |
| * | * | L | L | H | Inhibit |

* : Don't care.

# ADJUSTMENT PROCEDURE

## 1. Adjustment Procedure

- The following Test Equipments are required for adjustment of the Industrial Colour Camera WV-E550E and WV-PS550.
- Digital Multimeter
- Frequency Counter
- Oscilloscope
- Signal Generator
- Special Effects Generator
- G/L Signal Generator
- Waveform Monitor
- Vectorscope
- Underscanned Colour Video Monitor
- DC Power Supply Unit
- Auto Iris Servo Control Zoom Lens
- Lens Cable (WV-CA12T12)
- 36-pin/28-pin Camera Cable
- N-Coaxial Cable
- Remote Control Unit (WV-RC700A)
- Remote Control Box (WV-CB700AE)
- Lighting (200 footcandles (2,000 lux), 3200°K)
- Lux Meter
- In-Mega Chart
- ND-8 Filter
- D Sub/BNC Cable (WV-CA9T5)
- Logarithmic Gray Scale Chart ( Part Number: YWV2310RB99) as shown in Fig. 1-1.

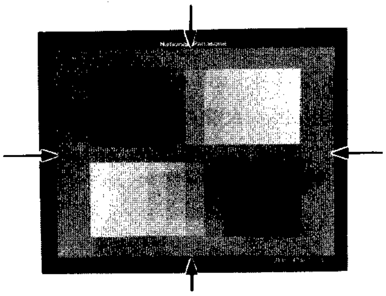


Fig. 1-1

- Extension Board (Part Number: YWV0EA0289AN) for System Control Board, Preprocess Board and Preamp/Encoder Board as shown in Fig. 1-2.

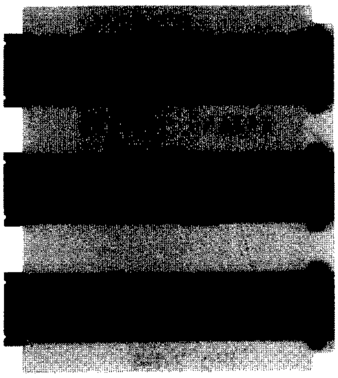


Fig. 1-2

- Extension Board (Part Number: YWV0EA0288AN) for Power Board and Digital Process Board as shown in Fig. 1-3.

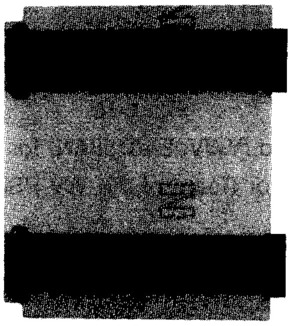


Fig. 1-3

- Extension Board (Part Number: YWV0EA0287AN) for Drive Board and Preamp/Encoder Board as shown in Fig. 1-4.

Fig. 1-4

- Flexible Cable (Part Number: YWV0EA0295AN 1 piece) for between System Control Board and Digital Process Board as shown in Fig. 1-5.

Fig. 1-5

- Flexible Cable (Part Number: YWV0EA0292AN 3 pieces) for between Rear Board and Mother Board as shown in Fig. 1-6.

Fig. 1-6

- Flexible Cable (Part Number: YWV0EA0293AN 3 pieces) for between Sync Board and Preamp/Encoder Board as shown in Fig. 1-7.

Fig. 1-7

- Flexible Cable (Part Number: YWV0EA0290AN 1 piece) for between Drive Board and Sensor Board as shown in Fig. 1-8.

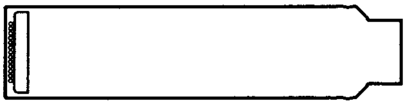


Fig. 1-8

- Flexible Cable (Part Number: YWV0EA0291AN 1 piece) for between Preamp/Encoder Board and Sensor Board as shown in Fig. 1-9.

Fig. 1-9

- Flexible Cable (Part Number: YWV0EA0294AN) for between System Control Board and Digital Process Board as shown in Fig. 1-10.

Fig. 1-10

- Extension Board (YWV0EA0158AN) for Modulator Board and Demodulator Board of the WV-PS550 as shown in Fig. 1-11.

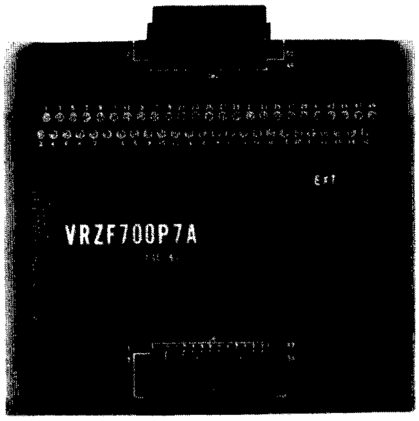

VRZF700P7A

Fig. 1-11

# 2. Disassembling Procedure for Adjustment

## 2.1. WV-E550E

- Referring to Fig. 2-1-1, remove four screws fixing the Upper Cover and remove the Upper Cover.

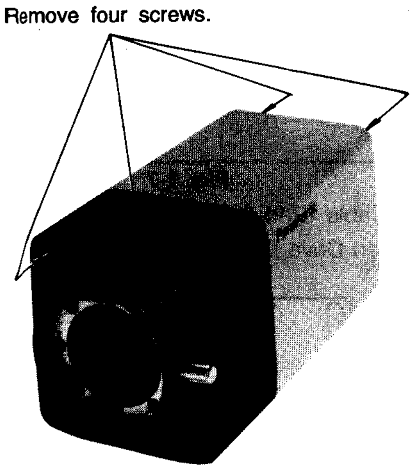

Remove four screws.

Fig. 2-1-1

- Referring to Fig. 2-1-2, remove three screws fixing the PCB Holder and remove the PCB Holder.
- Pull the Rear Board Ass'y out from three connectors on the Mother Board.

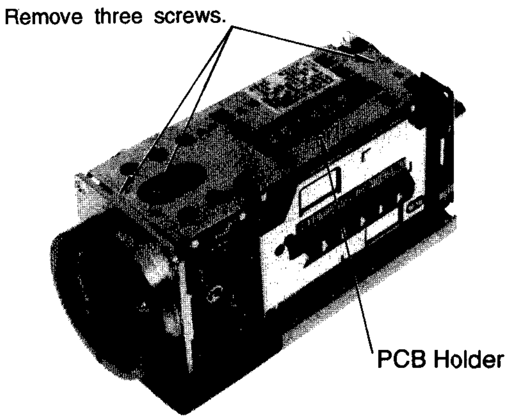

Remove three screws.
PCB Holder

Fig. 2-1-2

- Referring to Fig. 2-1-3, disconnect one Flexible Board from CN3 on the Drive Board and disconnect one Flexible Board from the CN10 on the Preamp /Encoder Board.

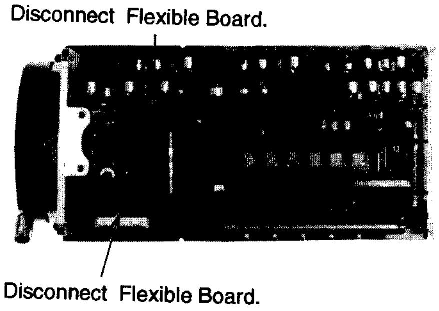

Disconnect Flexible Board.
Disconnect Flexible Board.

Fig. 2-1-3

- Referring to Fig. 2-1-4, pull each Board Ass'y out from their connectors on the Mother Board Ass'y.

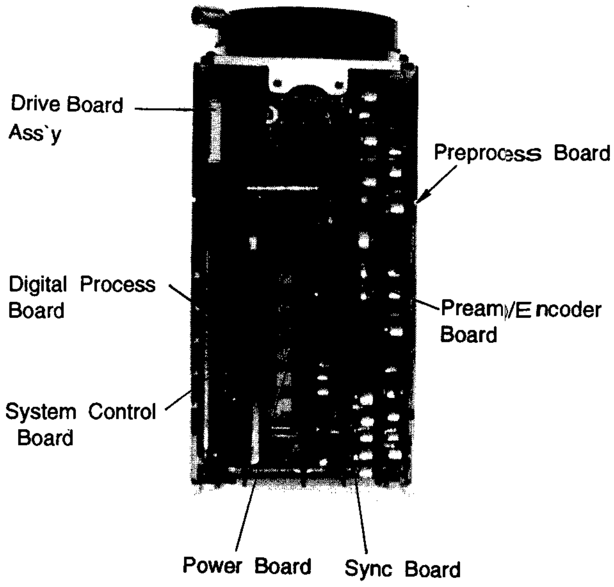

Drive Board Ass'y
Preprocess Board
Digital Process Board
Preamp/Encoder Board
System Control Board
Power Board
Sync Board

Fig. 2-1-4

## 2.2. WV-PS550

- Referring to Fig. 2-2-1, remove sixteen screws fixing the Upper Cover and the Bottom Cover, and then remove the Upper Cover and the Bottom Cover.

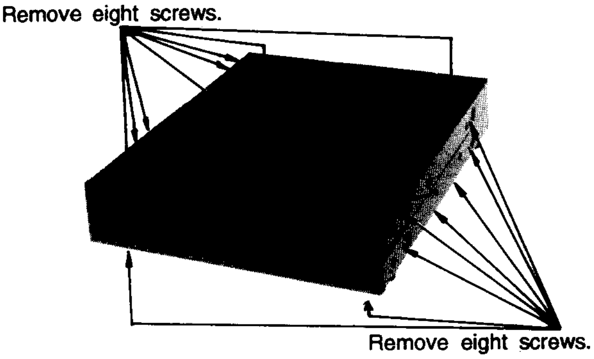

Remove eight screws.
Remove eight screws.

Fig. 2-2-1

- Referring to Fig. 2-2-2, remove five screws fixing the Power Board and disconnect three connectors from the Power Board, then remove the Power Board.
- Remove two screws fixing the Mounting Bracket and remove the Mounting Bracket.

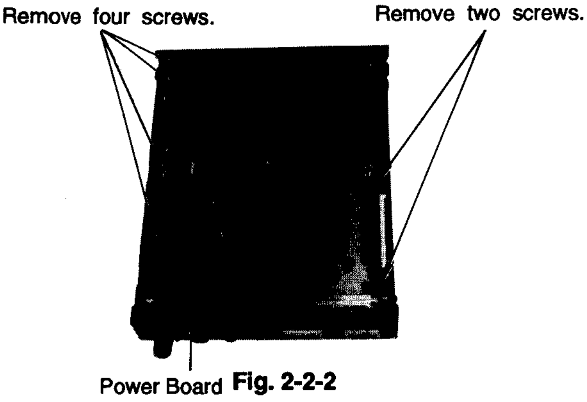

Remove four screws.
Remove two screws.
Power Board

Fig. 2-2-2

- Referring to Fig. 2-2-3, remove two screws fixing the Power Supply Unit and remove the Power Supply Unit.

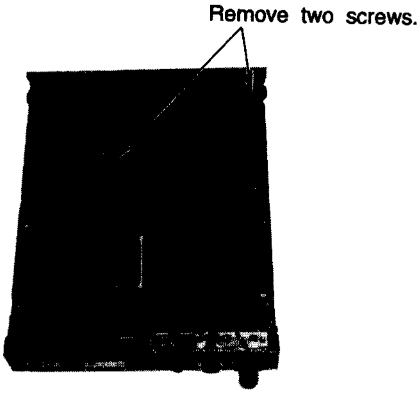

Remove two screws.

Fig. 2-2-3

- Referring to Fig. 2-2-4, turn the Mother Ass'y then pull the Modulator Board Ass'y and the Demodulator Board Ass'y out from the connectors on the Mother Board.
- Remove one screw and one plastic rivet fixing the Audio Board and pull the Audio Board Ass'y from the connector on the Audio Mother Board.

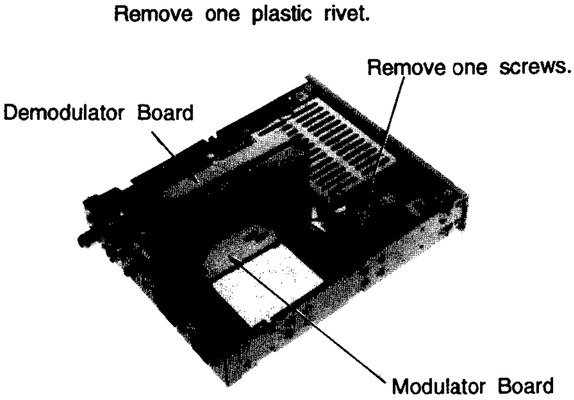

Remove one plastic rivet.
Remove one screws.
Demodulator Board
Modulator Board

Fig. 2-2-4

## 3. Head Optical Ass'y Replacement

- Referring to Fig. 2-1-3, disconnect one Flexible Board from CN3 on the Drive Board and disconnect one Flexible Board from the CN10 on the Preamp /Encoder Board.
- Referring to Fig. 3-1, remove two screws and remove the Head Optical Ass'y.

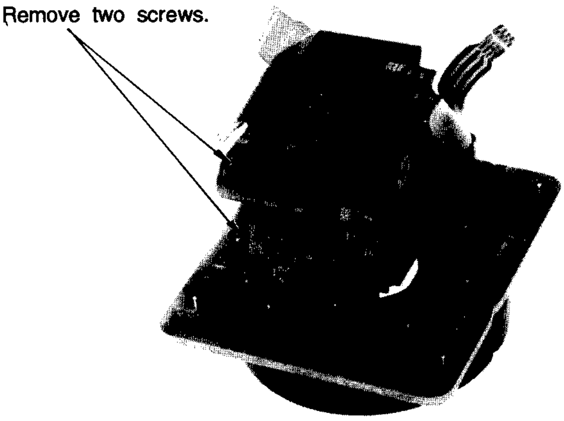

Remove two screws.

Fig. 3-1

# 4. Connection and Setting Up for Adjustment

## 4.1. Connection

**The Fig. 4-1-1 shows the connecting diagram for adjustment of WV-E550E.**

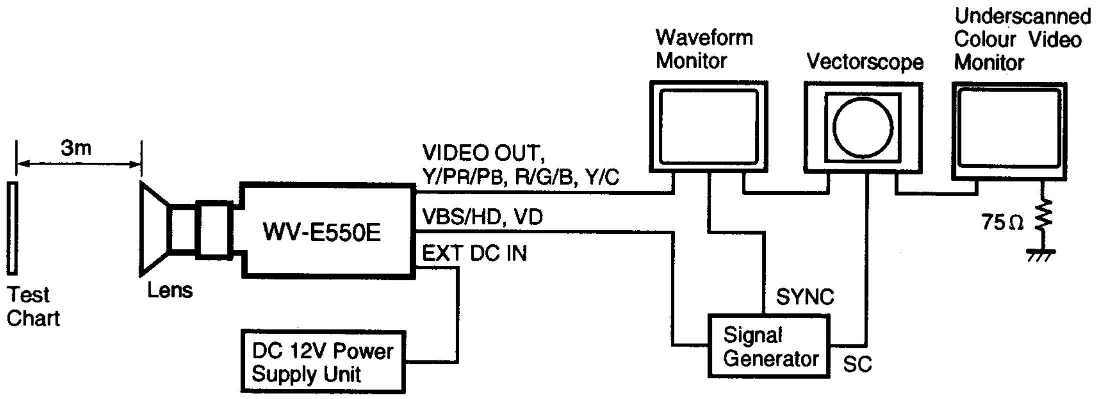

Waveform Monitor
Vectorscope
Underscanned Colour Video Monitor
3m
VIDEO OUT, Y/PR/PB, R/G/B, Y/C
VBS/HD, VD
EXT DC IN
WV-E550E
75Ω
Test Chart
Lens
SYNC
DC 12V Power Supply Unit
Signal Generator
SC

Fig. 4-1-1

- Connect the Underscanned Colour Video Monitor to the VIDEO OUT Connector on the Rear Panel of the WV-E550E through the Waveform Monitor and the Vectorscope using the coaxial cables.
- Terminate the input terminal of the Underscanned Colour Video Monitor with 75Ω.
- Connect the Signal Generator to the VBS/HD Connector on the Rear Panel using coaxial cable.
- Connect the 12V DC Power Supply Unit to the EXT DC IN Connector on the Rear Panel of the WV-E550E.
- Connect prove of the Oscilloscope, Frequency Counter and Digital Voltmeter to desired Test Point in each adjustment step.

**The Fig. 4-1-2 shows the connecting diagram for adjustment of WV-PS550.**

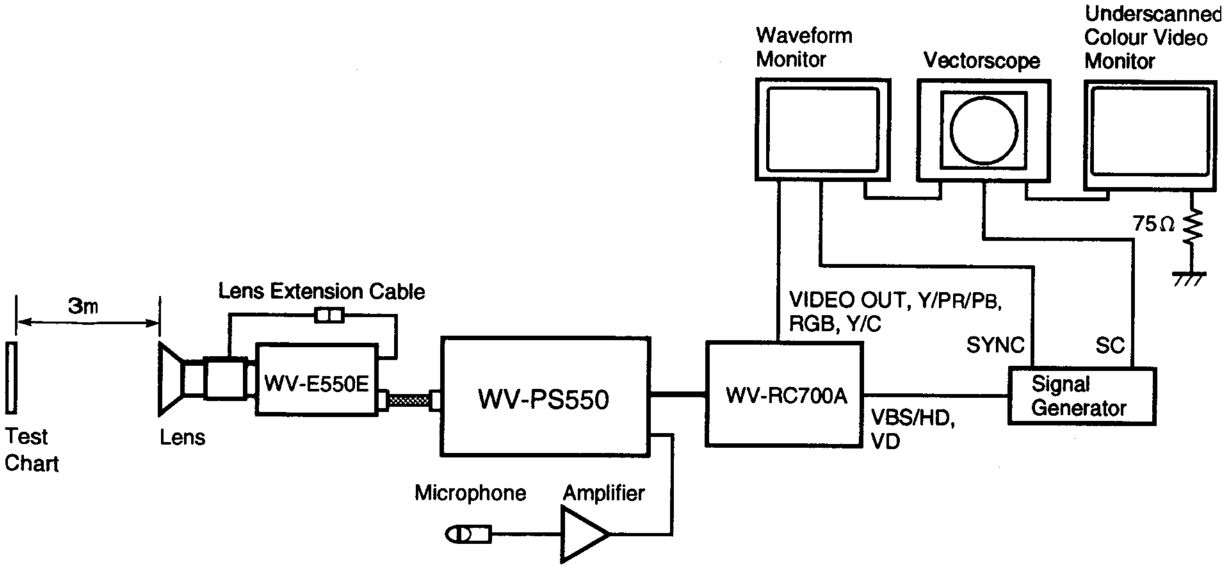

Waveform Monitor
Vectorscope
Underscanned Colour Video Monitor
75Ω
3m
Lens Extension Cable
VIDEO OUT, Y/PR/PB, RGB, Y/C
SYNC
SC
WV-E550E
WV-PS550
WV-RC700A
Signal Generator
VBS/HD, VD
Test Chart
Lens
Microphone
Amplifier

Fig. 4-1-2

- Connect the Underscanned Colour Video Monitor to the VIDEO OUT 1 Connector on the Rear Panel of the WV-RC700A through the Waveform Monitor and the Vectorscope using the coaxial cables.
- Terminate the input terminal of the Underscanned Colour Video Monitor with 75Ω.
- Connect the Signal Generator to the GEN-LOCK IN Connector on the Rear Panel of the WV-RC700A using the coaxial cable.

- Connect between the MPX Connector on the Rear Panel of the WV-RC700A and the MPX Connector on the Rear panel of the WV-PS550 using the N-Coaxial Cable, then Cable Select Switch on the Rear Panel of the WV-RC700A set to VP side.
- Connect between the Control Connector on the Rear Panel of the WV-E550E and the Camera Connector on the Rear Panel of the WV-PS550 using the 36-pin/28pin Camera Cable.
- Connect prove of the Oscilloscope, Frequency Counter and Digital Voltmeter to desired Test Point in each adjustment step.

## 4.2. Mode Setting for Adjustment

- The modes setting for adjustment should be set with the **PAGE**, **ITEM (AWC)**, **UP (ABC)** and **DOWN (BAR)** switches are mounted on the Rear Panel of the Camera.
- Press the **PAGE** switch more than 3 seconds, the Setup Menu as shown in Table 4-1 will be displayed.

```
      ** SETUP **
GAIN          AGC HIGH
IRIS          AUTO
SHUTTER       OFF
WHITE BAL     ATW
DTL LEVEL     LOW
SCENE FILE    SCENE1

INIT   USER   END
```

**Table 4-1**

- Select the item **GAIN** by the **ITEM** switch, then set to **0DB** by either the **UP** switch or **DOWN** switch.
- Select the item **IRIS** by the **ITEM** switch, then set to **MANU** by either the **UP** switch or **DOWN** switch.
- Select the item **DTL LEVEL** by the **ITEM** switch, then set to **OFF** by either the **UP** switch or **DOWN** switch.
- The menu as shown in Table 4-2 will be obtained.

```
      ** SETUP **
GAIN          0DB
IRIS          MANU
SHUTTER       OFF
WHITE BAL     ATW
DTL LEVEL     OFF
SCENE FILE    USER A

INIT   USER   END
```

**Table 4-2**

- Select the item **INIT** by the **ITEM** switch, then press the **PAGE** switch three times.
- Select the item **COLOUR BAR** by **ITEM** switch, then set to **2** by either the **UP** switch or **DOWN** switch so that the menu as shown in Table 4-3 will be displayed.

```
NO.3  ** INITIAL **
SYNCHRO-SCAN   253/525
FLD/FRM        FIELD
GAMMA          ON
2D LPF         OFF
COLOR BAR      2


RET   END
```

**Table 4-3**

- Select the item **USER** by the **ITEM** switch, then press the **PAGE** switch so that the menu as shown in Table 4-4 will be displayed.

```
NO.1     USER A        * 0DB
 (.35 - .45)       CURR   NEW
*GAMMA              .45   .45
*GAMMA              .45   .45
 KNEE POINT         88%   88%
 WHITE CLIP         110   110
*H. DTL LEVEL H      31    31
*V. DTL LEVEL H      31    31
*H. DTL LEVEL L      15    15
*V. DTL LEVEL L      15    15

 RET   END
```

**Table 4-4**

- Select the item **KNEE POINT** by the **ITEM** switch, then set to **98 %** by either the **UP** switch or **DOWN** switch.
- Select the item **END** by the **ITEM** switch, then press the **PAGE** switch.
- All adjustment steps should be done with this standard menu, unless otherwise specified.

## 4.3. Setting Up

**Set the Standard Picture as follows:**

- Mount the Auto Iris Lens on the Camera Head.
- Set the Logarithmic Gray Scale Chart.
- Incident light intensity of 2,000 ± 50 lux on the Logarithmic Gray Scale Chart.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Camera so that the Logarithmic Gray Scale Chart becomes full picture on the Underscanned Colour Video monitor.
- Connect the Oscilloscope to TP201(G IN) on the Preprocess Board.

- Turn the Lens Focus to obtain correct focal point.
- Set the Lens Iris so that the peak level of the gray scale from the blanking level becomes 300 mV as shown in Fig. 4-2.

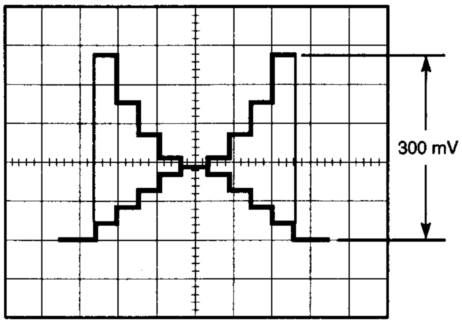


Fig. 4-2

- The adjustment should be done with this initial setting, unless otherwise specified.

## 5.1. Adjustment Procedure for WV-E550E

- Refer to the Location of the Test Points and Adjusting Controls on page 62.

■ When adjsting the Power Board, use Extension Board (Part No. : YWV0EA0288AN) as shown in page 38.

### (1) 5.2V Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP2 (5.2V)** | **Power Board** |
| **Adjust:** | **VR1 (5.2V)** | **Power Board** |

- Connect the Digital Voltmeter to TP2.
- Adjust VR1 to obtain 5.2 ± 0.05 V DC.

### (2) Reset Phase Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP3 (FREQ)** | **Power Board** |
| **Adjust:** | **VR2 (FREQ)** | **Power Board** |

- Connect the Digital Voltmeter to TP3.
- Trigger the Oscilloscope at the H rate.
- Adjust VR2 so that the phase of the Reset Pulse becomes 8T as shown in Fig. 5-1-1.

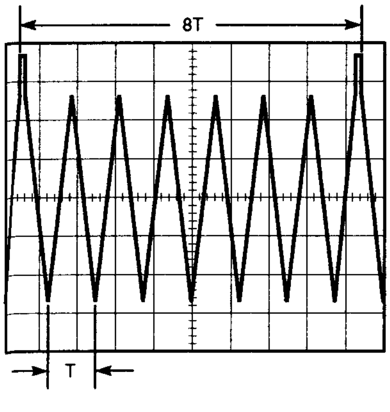


Fig. 5-1-1

■ When adjsting the Drive Board, use Extension Board (Part No. : YWV0EA0287AN) and Flexible Cable (Part No. : YWV0EA0291AN) as shown in page 38.

### (3) Drive PLL Adjustment

| | | |
|---|---|---|
| **Test point:** | **TP7 (PD)** | **Drive Board** |
| **Adjust:** | **L1 (28MHz VCO)** | **Drive Board** |

- Connect the Digital Voltmeter to TP7.
- Adjust L1 to obtain 1.8 ± 0.2 V DC.

### (4) VSUB (CCD Bias) Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP4 (SUB-B)** | **Drive Board** |
| | **TP5 (SUB-G)** | **Drive Board** |
| | **TP6 (SUB-R)** | **Drive Board** |
| **Adjust:** | **VR4 (SUB-B)** | **Drive Board** |
| | **VR5 (SUB-G)** | **Drive Board** |
| | **VR6 (SUB-R)** | **Drive Board** |

- Referring to Fig. 5-1-2, check each VSUB voltage on the Indication Label of the Head Optical Ass'y.
- Connect the Digital Voltmeter to TP4.
- Adjust VR4 to obtain Bch VSUB Voltage which indicated on the label.
- Change the Digital Voltmeter to TP5.
- Adjust VR5 to obtain Gch VSUB Voltage which indicated on the label.
- Change the Digital Voltmeter to TP6.
- Adjust VR6 to obtain Rch VSUB Voltage which indicated on the label.

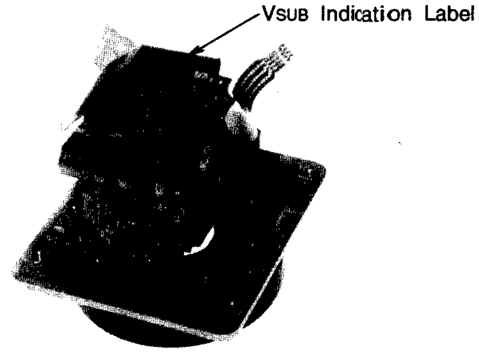


Fig. 5-1-2

### (5) Reset Gate Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP502 (R OUT)** | **Preamp/Encoder Board** |
| | **TP602 (G OUT)** | **Preamp/Encoder Board** |
| | **TP702 (B OUT)** | **Preamp/Encoder Board** |
| | **TP401 (GND)** | **Preamp/Encoder Board** |
| **Adjust:** | **VR1 (RG-R)** | **Drive Board** |
| | **VR2 (RG-G)** | **Drive Board** |
| | **VR3 (RG-B)** | **Drive Board** |

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Lens iris fully open.

- Connect the Ground terminal of the Oscilloscope to TP401.
- Connect the Oscilloscope to TP502.
- Adjust VR1 so that the Preamp output signal becomes maximum.
- Change the Oscilloscope to TP602.
- Adjust VR2 so that the Preamp output signal becomes maximum.
- Change the Oscilloscope to TP702.
- Adjust VR3 so that the Preamp output signal becomes maximum.

■ When adjsting the Sync Board, use Extension Board (Part No. : YWV0EA0289AN) for Encoder Section, Extension Board (Part No. : YWV0EA0287AN) for Preamp Section and Flexible Cable (Part No. : YWV0EA0290AN) for Preamp section as shown in page 38.

### (6) H-LOCK Frequency Adjustment

**Test point:** **TP8 (SC)** **Sync Board**
**Adjust:** **VR1 (H-LOCK)** **Sync Board**

- Connect the Frequency Counter to TP8.
- Adjust VR1 to obtain 4.433618 MHz ± 10 Hz.

### (7) G/L Sync PLL Adjustment

**Test point:** **TP5 (G/L VCO)** **Sync Board**
**Adjust:** **L1 (G/L VCO)** **Sync Board**

- Supply the Black Burst Signal or Video signal to the VBS/HD Connector on the Rear Panel.
- Connect the Digital Voltmeter to TP5.
- Adjust L1 to obtain 2.8 ± 0.2 V DC.

### (8) Clock Pulse Phase Adjustment

**Test point:** **TP6 (8FSC)** **Digital Process Board**
**TP5 (4FSC)** **Digital Process Board**
**TP2 (8FSC-2)** **Digital Process Board**
**TP4 (4FSC-2)** **Digital Process Board**
**TP8 (GND)** **Digital Process Board**
**Adjust:** **CT2 (8FSC-2 PHASE)** **Digital Process Board**
**CT1 (4FSC PHASE)** **Digital Process Board**
**CT3 (4FSC-2 PHASE)** **Digital Process Board**

- Connect CH1 of the Oscilloscope to TP6.
- Connect CH2 of the Oscilloscope to TP5.
- Connect the Ground terminal of the Oscilloscope to TP8.
- Adjust CT2 to obtain 5 ± 1 nsec as shown in Fig. 5-1-3.

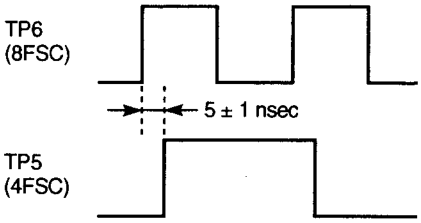


Fig. 5-1-3

- Change CH1 of the Oscilloscope to TP5.
- Change CH2 of the Oscilloscope to TP2.
- Adjust CT1 to obtain 4 ± 1 nsec as shown in Fig. 5-1-4.

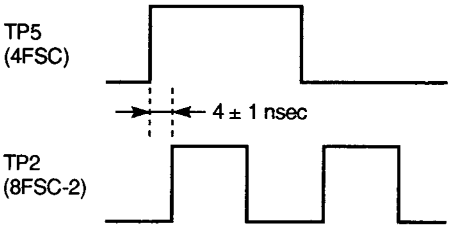


Fig. 5-1-4

- Change CH1 of the Oscilloscope to TP2.
- Change CH2 of the Oscilloscope to TP4.
- Adjust CT3 to obtain 4 ± 1 nsec as shown in Fig. 5-1-5.

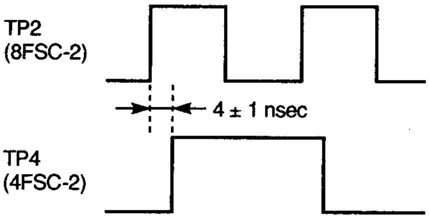


Fig. 5-1-5

### (9) Character Position Adjustment

**Test point:** **VIDEO OUT CONNECTOR** **Rear Panel**
**Adjust:** **CT1 (CHARACTER)** **System Control Board**

- Press the **DOWN (BAR)** switch more than 3 seconds so that the Colour Bar 2 mode is selected.
- Press the **PAGE** switch on the Rear Panel more than 3 seconds.
- Adjust CT1 so that the left edge of the **U** character of the **SHUTTER** word becomes a divider line of the White and Yellow of the Colour Bar as shown in Fig. 5-1-6.

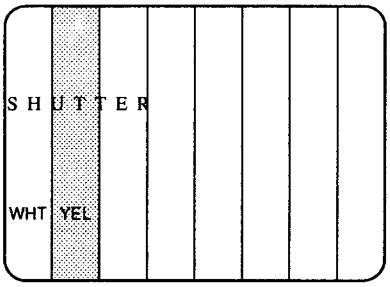


Fig. 5-1-6

■ When adjsting the Preamp/Encoder Board, use Extension Board (Part No. : YWV0EA0289AN) for Encoder Section, Extension Board (Part No. : YWV0EA0287AN) for Preamp Section and Flexible Cable (Part No. : YWV0EA0290AN) for Preamp section as shown in page 38.

## (10) Colour Bar Adjustment

- Press the **DOWN (BAR)** switch more than 3 seconds so that the Colour Bar 2 mode is selected.

### (10)-1 Y/C Mode (OUTPUT SEL2) Adjustment

**Test Point: Pin 6 of CN6 (Y) Rear Panel**
**Adjust: VR3 (Y) Preamp/Encoder Board**
**VR1 (SYNC) Preamp/Encoder Board**

- Connect the terminated Oscilloscope with 75 Ω to the Pin 6 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL2** by the **ITEM** switch, then set the **Y/C** mode by either **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-1 will be displayed.

```
NO.5  ** INITIAL **
OUTPUT SEL1   Y/C
OUTPUT SEL2   Y/C
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF

RET   END
```

Table 5-1-1

- Adjust VR3 so that the Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-7.
- Adjust VR1 so that the Sync Level becomes 300 ± 14 mV as shown in Fig. 5-1-7.

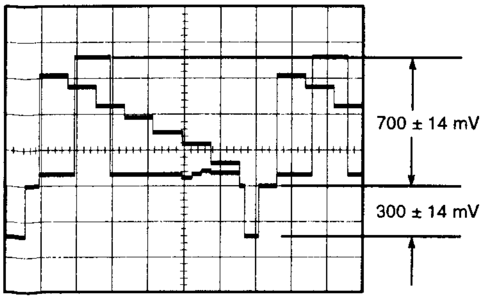


Fig. 5-1-7

### (10)-2 ENC Mode (OUTPUT SEL2) Adjustment

**Test Point: Pin 6 of VIDEO/RGB Connector**
**Rear Panel**
**Adjust: VR4 (COMP Y) Preamp/Encoder Board**

- Connect the terminated Oscilloscope with 75 Ω to the Pin 6 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL2** by the **ITEM** switch, then set the **ENC** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-2 will be displayed.

```
NO.5  ** INITIAL **
OUTPUT SEL1   Y/C
OUTPUT SEL2   ENC
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF

RET   END
```

Table 5-1-2

- Adjust VR4 so that the COMP Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-8.

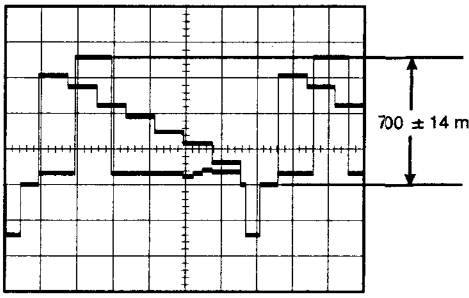
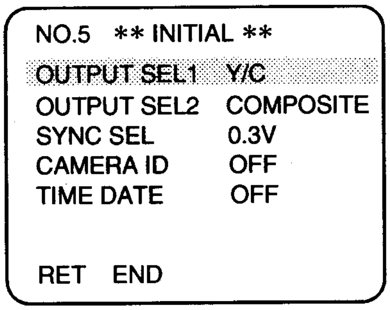


Fig. 5-1-8

### (10)-3 Composite Mode (OUTPUT SEL2) Adjustment

**Test Point: VIDEO OUT CONNECTOR Rear Panel**
**Pin 6 of VIDEO/RGB Connector**
**Rear Panel**
**Adjust: VR5 (C GAIN) Preamp/Encoder Board**
**VR6 (R-Y GAIN) Preamp/Encoder Board**
**VR7 (CAR BAL B) Preamp/Encoder Board**
**VR8 (CAR BAL R) Preamp/Encoder Board**
**CT1 (PHASE) Preamp/Encoder Board**
**VR14 (BURST LEVEL)**
**Preamp/Encoder Board**
**VR24 (W-CLIP) Preamp/Encoder Board**

- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL2** by the **ITEM** switch, then set the **COMPOSITE** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-3 will be displayed.



NO.5 ** INITIAL **

| | |
|---|---|
| OUTPUT SEL1 | Y/C |
| OUTPUT SEL2 | COMPOSITE |
| SYNC SEL | 0.3V |
| CAMERA ID | OFF |
| TIME DATE | OFF |

RET END

**Table 5-1-3**

- Adjust VR5 so that the each chroma vector positions at their correct positions on the Vectorscope as shown in Fig. 5-1-9.
- Adjust VR6 so that the each chroma vector positions at their correct positions on the Vectorscope as shown in Fig. 5-1-9.

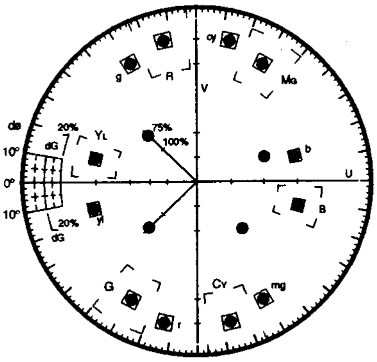


Fig. 5-1-9

- Set the Gain Control of the Vectorscope to maximum.
- Adjust VR7 so that the vector positions at center of the Vectorscope as shown in Fig. 5-1-10.
- Adjust VR8 so that the vector positions at center of the Vectorscope as shown in Fig. 5-1-10.

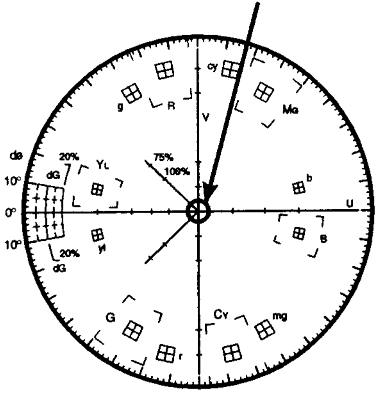


Fig. 5-1-10

- Adjust CT1 so that the each chroma vector positions at their correct positions on the Vectorscope as shown in Fig. 5-1-9.
- Adjust VR14 so that the Burst Level becomes 300 ± 7 mVp-p as shown in Fig. 5-1-11.

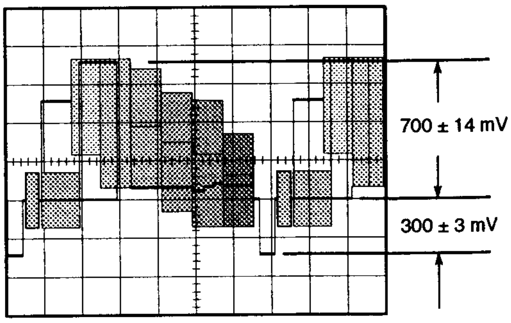


Fig. 5-1-11

- Confirm that the Burst Level becomes 100 % on the Vectorscope.
- Connect the terminated Oscilloscope with 75 Ω to the Pin 6 of CN6.
- Adjust VR24 so that the White Clip Level becomes 112 %.

### (10)-4 Burst Phase Adjustment

**Test Point:** **VIDEO OUT CONNECTOR** **Rear Panel**
**Adjust:** **VR18 (BURST PHASE)**
**Preamp/Encoder Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Adjust VR18 so that the Burst Phase becomes correct position of the Vectorscope as shown in Fig. 5-1-12.

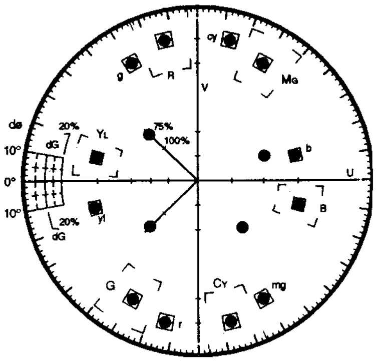


Fig. 5-1-12

### (10)-5 Y/PR/PB Mode (OUTPUT SEL1) Adjustment

**Test Point:** **Pin 4 of VIDEO/RGB Connector**
**Rear Panel**
**Pin 3 of VIDEO/RGB Connector**
**Rear Panel**
**Pin 5 of VIDEO/RGB Connector**
**Rear Panel**

| **Adjust:** | | |
|---|---|---|
| | **VR10 (Y)** | **Preamp/Encoder Board** |
| | **VR2 (Y-SYNC)** | **Preamp/Encoder Board** |
| | **VR12 (PR)** | **Preamp/Encoder Board** |
| | **VR13 (PB)** | **Preamp/Encoder Board** |
| | **VR25 (W-CLIP)** | **Preamp/Encoder Board** |

- Connect the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL1** by the **ITEM** switch, then set the **Y/PR/PB** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-4 will be displayed.

```
NO.5   ** INITIAL **
OUTPUT SEL1    Y/PR/PB
OUTPUT SEL2    COMPOSITE
SYNC SEL       0.3V
CAMERA ID      OFF
TIME DATE      OFF


RET   END
```

**Table 5-1-4**

- Preadjust VR25 so that the Y Level does not clip.
- Adjust VR10 so that the Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-13.
- Adjust VR2 so that the Sync Level becomes 300 ± 14 mV as shown in Fig. 5-1-13.

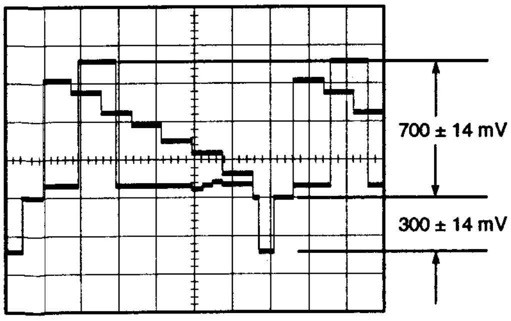


**Fig. 5-1-13**

- Change the terminated Oscilloscope with 75 Ω to the Pin 3 of the VIDEO/RGB Connector.
- Adjust VR12 so that the PR Level becomes 700 ± 14 mV as shown in Fig. 5-1-14.

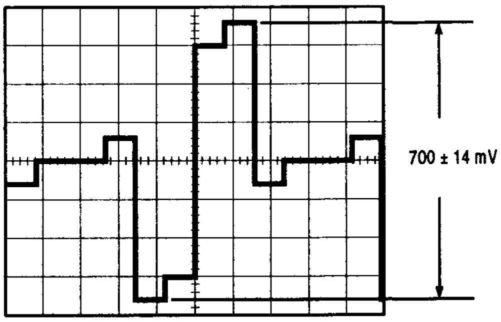


**Fig. 5-1-14**

- Change the terminated Oscilloscope with 75 Ω to the Pin 5 of the VIDEO/RGB Connector.
- Adjust VR13 so that the PB Level becomes 700 ± 14 mV as shown in Fig. 5-1-15.

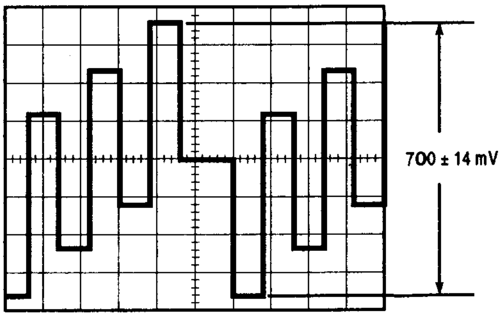


**Fig. 5-1-15**

- Change the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Adjust VR25 so that the Y Level becomes 800± 14 mV.

### (10)-6 Y/C Mode (OUTPUT SEL1) Adjustment

**Test Point:** **Pin 4 of VIDEO/RGB Connector**
**Rear Panel**
**Pin 3 of VIDEO/RGB Connector**
**Rear Panel**

| **Adjust:** | | |
|---|---|---|
| | **VR3 (Y)** | **Preamp/Encoder Board** |
| | **VR9 (C/BURST)** | **Preamp/Encoder Board** |

- Connect the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL1** by the **ITEM** switch, then set the **Y/C** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-5 will be displayed.

```
NO.5   ** INITIAL **
OUTPUT SEL1   Y/C
OUTPUT SEL2   COMPOSITE
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF

RET   END
```

Table 5-1-5

- Confirm that the Y Level becomes 700 ± 14 mV.
  If not readjust VR3 so that the Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-16.

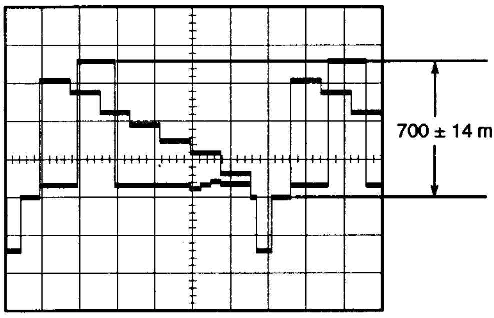


Fig. 5-1-16

- Change the terminated Oscilloscope with 75 Ω to the Pin 3 of the VIDEO/RGB Connector.
- Adjust VR9 so that the Burst Level becomes 300 ± 14 mV as shown in Fig. 5-1-17.

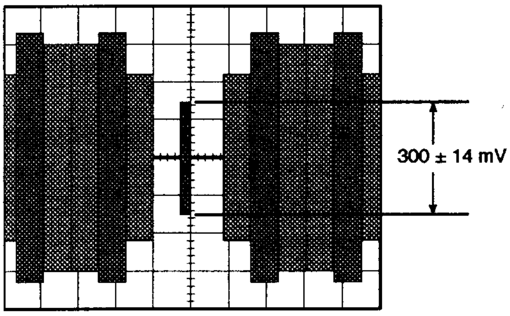


Fig. 5-1-17

### (10)-7 R/G/B Mode (OUTPUT SEL1) Adjustment

| | | |
|---|---|---|
| **Test Point:** | **Pin 4 (G) of VIDEO/RGB Connector** | **Rear Panel** |
| | **Pin 3 (R) of VIDEO/RGB Connector** | **Rear Panel** |
| | **Pin 5 (B) of VIDEO/RGB Connector** | **Rear Panel** |
| **Adjust:** | **VR21 (G GAIN)** | **Preamp/Encoder Board** |
| | **VR22 (R GAIN)** | **Preamp/Encoder Board** |
| | **VR23 (B GAIN)** | **Preamp/Encoder Board** |

- Connect the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL1** by the **ITEM** switch, then set the **R/G/B** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-6 will be displayed.

```
NO.5   ** INITIAL **
OUTPUT SEL1   R/G/B
OUTPUT SEL2   COMPOSITE
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF

RET   END
```

Table 5-1-6

- Adjust VR21 so that the white portion of the Video signal level becomes 700 ± 14 mV as shown in Fig. 5-1-18.

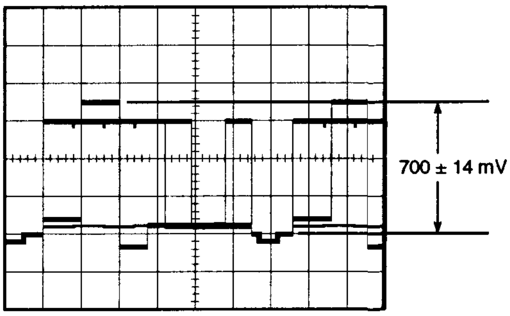
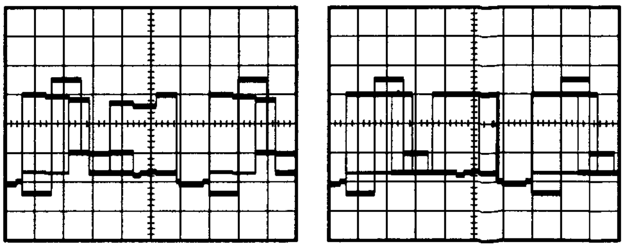


Fig. 5-1-18

- Change the terminated Oscilloscope with 75 Ω to the Pin 3 of the VIDEO/RGB Connector.
- Adjust VR22 so that the Video signal level becomes flat level as shown in Fig. 5-1-19.



No Good Good

Fig. 5-1-19

- Change the terminated Oscilloscope with 75 Ω to the Pin 5 of the VIDEO/RGB Connector.
- Adjust VR23 so that the Video signal level becomes flat level as shown in Fig. 5-1-20.

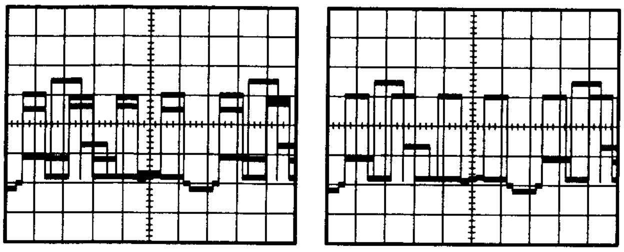

No Good Good

Fig. 5-1-20

- Before start to adjust following steps, press the **DOWN (BAR)** switch more than 3 seconds so that the Camera mode is selected.

### (11) Preamp DC Offset Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP502 (R OUT)** | **Preamp/Encoder Board** |
| | **TP602 (G OUT)** | **Preamp/Encoder Board** |
| | **TP702 (B OUT)** | **Preamp/Encoder Board** |
| | **TP401 (GND)** | **Preamp/Encoder Board** |
| **Adjust:** | **VR501 (R DC)** | **Preamp/Encoder Board** |
| | **VR601 (G DC)** | **Preamp/Encoder Board** |
| | **VR701 (B DC)** | **Preamp/Encoder Board** |

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Lens Iris to F8.
- Connect the Ground terminal of the Oscilloscope to TP401.
- Connect the Oscilloscope to TP502.
- Adjust VR501 so that the Black portion of the Video signal becomes 0 V DC (Ground level) as show in Fig. 5-1-21.
- Connect the Ground terminal of the Oscilloscope to TP602.
- Adjust VR601 so that the Black portion of the Video signal becomes 0 V DC (Ground level) as show in Fig. 5-1-21.
- Connect the Ground terminal of the Oscilloscope to TP702.
- Adjust VR701 so that the Black portion of the Video signal becomes 0 V DC (Ground level) as show in Fig. 5-1-21.

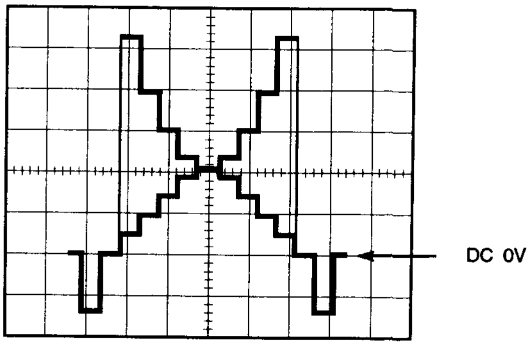


Fig. 5-1-21

### (12) Preamp Frequency Response Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP502 (R OUT)** | **Preamp/Encoder Board** |
| | **TP602 (G OUT)** | **Preamp/Encoder Board** |
| | **TP702 (B OUT)** | **Preamp/Encoder Board** |
| | **TP401 (GND)** | **Preamp/Encoder Board** |
| **Adjust:** | **CT501 (R FREQ)** | **Preamp/Encoder Board** |
| | **CT601 (G FREQ)** | **Preamp/Encoder Board** |
| | **CT701 (B FREQ)** | **Preamp/Encoder Board** |

- Aim the Camera at the In-Mega Chart.
- Connect the Ground terminal of the Oscilloscope to TP401.
- Connect the Oscilloscope to TP602.
- Set the Lens Iris so that the Video signal level at TP602 becomes 300 mV as shown in Fig. 5-1-22.
- Adjust CT601 so that each response becomes flat level and the 3 MHz signal level becomes 80 % against 0.5 MHz response as 100 % as shown in Fig. 5-1-22.
- Change the Oscilloscope to TP502.
- Adjust CT501 so that each response becomes flat level and the 3 MHz signal level becomes 80 % against 0.5 MHz response as 100 % as shown in Fig. 5-1-22.
- Change the Oscilloscope to TP702.
- Adjust CT701 so that each response becomes flat level and the 3 MHz signal level becomes 80 % against 0.5 MHz response as 100 % as shown in Fig. 5-1-22.

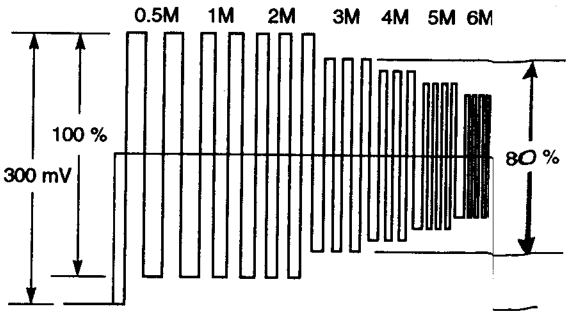


Fig. 5-1-22

- ■ Before start to adjust following steps, short between TP3 and TP4 on the System Control Board to clear the AWC/ABC data.

### (13) Input Gain Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP201 (G IN)** | **Preprocess Board** |
| | **TP102 (R GAIN-1)** | **Preprocess Board** |
| | **TP202 (G GAIN-1)** | **Preprocess Board** |
| | **TP302 (B GAIN-1)** | **Preprocess Board** |
| **Adjust:** | **VR101 (R GAIN-1)** | **Preprocess Board** |
| | **VR201 (G GAIN-1)** | **Preprocess Board** |
| | **VR301 (B GAIN-1)** | **Preprocess Board** |

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-23.

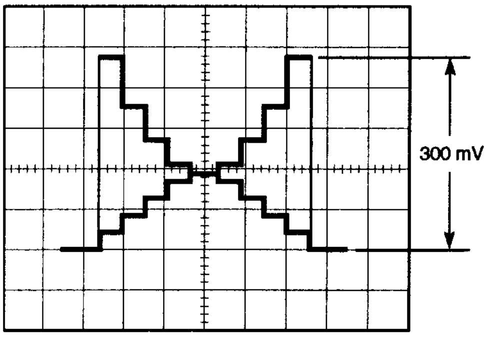


**Fig. 5-1-23**

- Change the Oscilloscope to TP102.
- Adjust VR101 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-24.
- Change the Oscilloscope to TP202.
- Adjust VR201 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-24.
- Change the Oscilloscope to TP302.
- Adjust VR301 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-24.

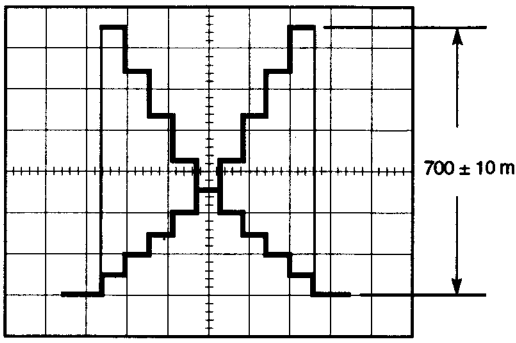


**Fig. 5-1-24**

### (14) Pedestal Adjustment

| | | |
|---|---|---|
| **Test Point:** | **VIDEO OUT CONNECTOR** | **Rear Panel** |
| **Adjust:** | **VR106 (R PED)** | **Preprocess Board** |
| | **VR206 (G PED)** | **Preprocess Board** |
| | **VR306 (B PED)** | **Preprocess Board** |

- Cap on the Lens.
- Adjust VR106 so that the Pedestal level becomes 10 % and the carrier becomes minimum as shown in Fig. 5-1-25.
- Adjust VR206 so that the Pedestal level becomes 10 % and the carrier becomes minimum as shown in Fig. 5-1-25.
- Adjust VR306 so that the Pedestal level becomes 10 % and the carrier becomes minimum as shown in Fig. 5-1-25.
- Repeat above steps until the Pedestal level becomes 10 % and the carrier becomes minimum.

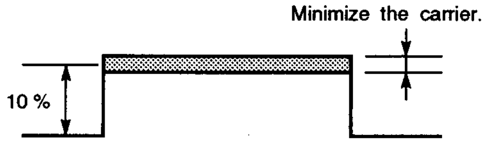


**Fig. 5-1-25**

### (15) 0dB Gain Coarse Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP201 (G IN)** | **Preprocess Board** |
| | **TP103 (R GAIN-2)** | **Preprocess Board** |
| | **TP203 (G GAIN-2)** | **Preprocess Board** |
| | **TP303 (B GAIN-2)** | **Preprocess Board** |
| **Adjust:** | **VR104 (R GAIN-2)** | **Preprocess Board** |
| | **VR204 (G GAIN-2)** | **Preprocess Board** |
| | **VR304 (B GAIN-2)** | **Preprocess Board** |

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-26.

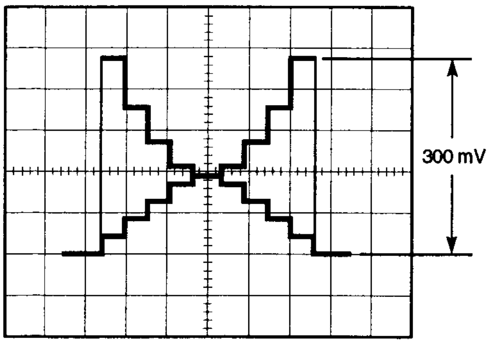


**Fig. 5-1-26**

- Change the Oscilloscope to TP103.
- Adjust VR104 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-27.
- Change the Oscilloscope to TP203.
- Adjust VR204 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-27.
- Change the Oscilloscope to TP303.
- Adjust VR304 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-27.

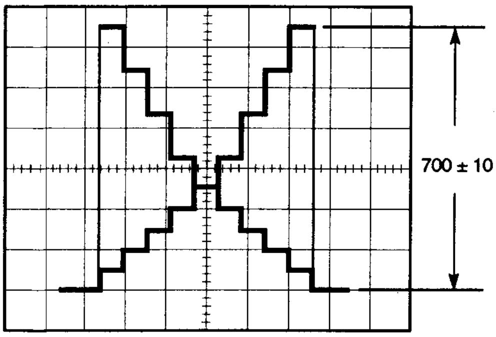


**Fig. 5-1-27**

## (16) Gamma Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP201 (G IN)** | **Preprocess Board** |
| | **TP106 (R GAMMA)** | **Preprocess Board** |
| | **TP206 (G GAMMA)** | **Preprocess Board** |
| | **TP306 (B GAMMA)** | **Preprocess Board** |
| **Adjust:** | **VR110 (R GAMMA MIN)** | **Preprocess Board** |
| | **VR108 (R GAMMA MAX)** | **Preprocess Board** |
| | **VR109 (R CROSS)** | **Preprocess Board** |
| | **VR107 (R KNEE)** | **Preprocess Board** |
| | **VR210 (G GAMMA MIN)** | **Preprocess Board** |
| | **VR208 (G GAMMA MAX)** | **Preprocess Board** |
| | **VR209 (G CROSS)** | **Preprocess Board** |
| | **VR207 (G KNEE)** | **Preprocess Board** |
| | **VR310 (B GAMMA MIN)** | **Preprocess Board** |
| | **VR308 (B GAMMA MAX)** | **Preprocess Board** |
| | **VR309 (B CROSS)** | **Preprocess Board** |
| | **VR307 (B KNEE)** | **Preprocess Board** |

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-28.

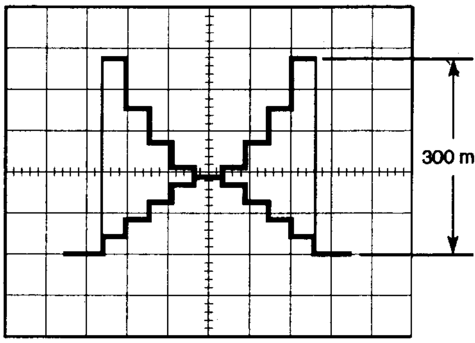


**Fig. 5-1-28**

- Set VR107, VR207 and VR307 so that Knee does not effect.
- Set VR109, VR209 and VR309 to minimum ($\gamma = 1$).
- Change the Oscilloscope to TP106.
- Adjust VR110 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-29.
- Change the Oscilloscope to TP206.
- Adjust VR210 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-29.
- Change the Oscilloscope to TP306.
- Adjust VR310 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-29.

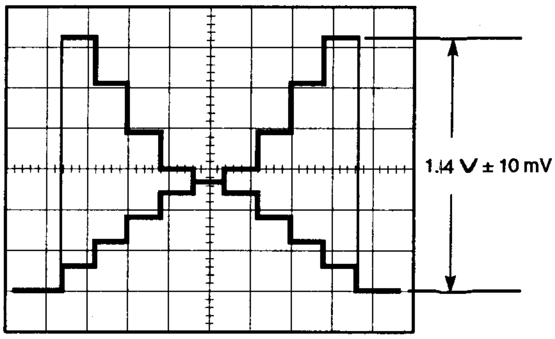


**Fig. 5-1-29**

- Set VR109, VR209 and VR309 to maximum ($\gamma = 0.4$).
- Change the Oscilloscope to TP106.
- Adjust VR108 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-30.
- Change the Oscilloscope to TP206.
- Adjust VR208 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-30.
- Change the Oscilloscope to TP306.
- Adjust VR308 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-30.

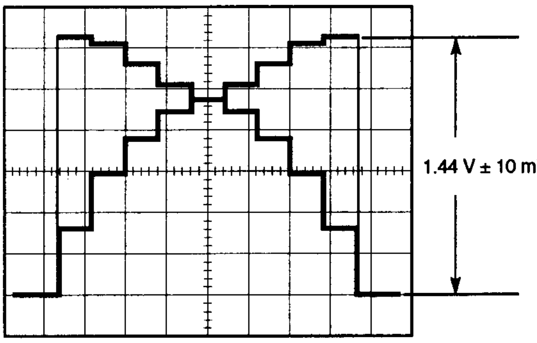


Fig. 5-1-30

- Repeat adjust between $\gamma = 1$ and $\gamma = 0.4$ so that the Video signal level does not changed.

### (17) Pedestal Coarse Adjustment

**Test Point:** **VIDEO OUT CONNECTOR** **Rear Panel**

**Adjust:** **VR106 (R PED)** **Preprocess Board**
**VR206 (G PED)** **Preprocess Board**
**VR306 (B PED)** **Preprocess Board**

- Cap on the Lens.
- Adjust VR106 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-31.
- Adjust VR206 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-31.
- Adjust VR306 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-31.

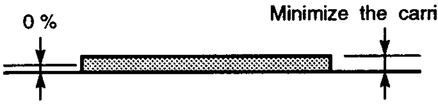


Fig. 5-1-31

### (18) Cross Point Adjustment

**Test Point:** **VIDEO OUT CONNECTOR** **Rear Panel**

**Adjust:** **VR109 (R CROSS)** **Preprocess Board**
**VR209 (G CROSS)** **Preprocess Board**
**VR309 (B CROSS)** **Preprocess Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Adjust VR109 so that the Cross Point level of the Gray Scale becomes 57 ± 2 % and the carrier becomes minimum as shown in Fig. 5-1-32.
- Adjust VR209 so that the Cross Point level of the Gray Scale becomes 57 ± 2 % and the carrier becomes minimum as shown in Fig. 5-1-32.
- Adjust VR309 so that the Cross Point level of the Gray Scale becomes 57 ± 2 % and the carrier becomes minimum as shown in Fig. 5-1-32.

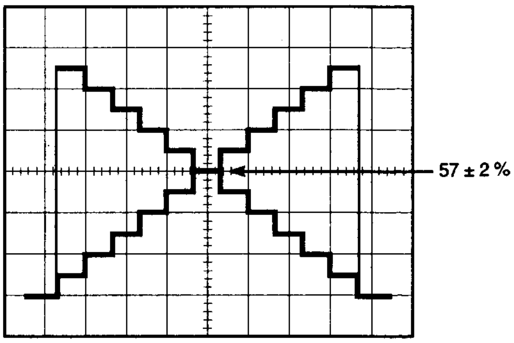


Fig. 5-1-32

### (19) Pulse Cancel and Pedestal Adjustment

**Test Point:** **VIDEO OUT CONNECTOR** **Rear Panel**

**Adjust:** **VR103 (R PULSE CANCEL)** **Preprocess Board**
**VR106 (R PED)** **Preprocess Board**
**VR203 (G PULSE CANCEL)** **Preprocess Board**
**VR206 (G PED)** **Preprocess Board**
**VR303 (B PULSE CANCEL)** **Preprocess Board**
**VR306 (B PED)** **Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB**.
- Cap on the Lens.
- Adjust VR103 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR203 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR303 so that the Pedestal level becomes 7.5 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Set the **GAIN** to **0dB**.
- Adjust VR106 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR206 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR306 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.

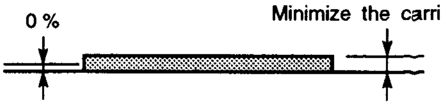


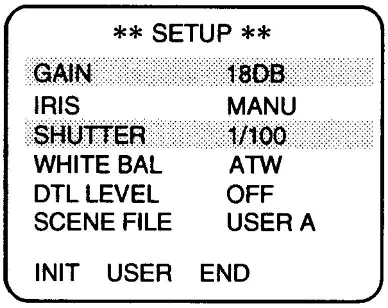
Fig. 5-1-33

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.

### (20) Shutter Pulse Cancel Coarse Adjustment

| | | |
|---|---|---|
| **Test Point:** | **VIDEO OUT CONNECTOR** | **Rear Panel** |
| **Adjust:** | **VR102 (R SHUTTER)** | **Preprocess Board** |
| | **VR202 (G SHUTTER)** | **Preprocess Board** |
| | **VR302 (B SHUTTER)** | **Preprocess Board** |

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB** and the **SHUTTER** to **1/100**, the menu as shown in Table 5-1-7 will be displayed.



```
        ** SETUP **
GAIN            18DB
IRIS            MANU
SHUTTER         1/100
WHITE BAL       ATW
DTL LEVEL       OFF
SCENE FILE      USER A

INIT   USER   END
```

**Table 5-1-7**

- Cap on the Lens.
- Adjust VR102 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-34.
- Adjust VR202 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-34.
- Adjust VR302 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-34.

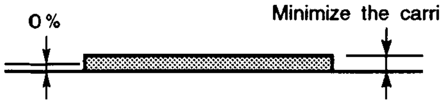


**Fig. 5-1-34**

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.

### (21) Input Gain Fine Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP201 (G IN)** | **Preprocess Board** |
| | **TP102 (R GAIN-1)** | **Preprocess Board** |
| | **TP202 (G GAIN-1)** | **Preprocess Board** |
| | **TP302 (B GAIN-1)** | **Preprocess Board** |
| **Adjust:** | **VR101 (R GAIN-1)** | **Preprocess Board** |
| | **VR201 (G GAIN-1)** | **Preprocess Board** |
| | **VR301 (B GAIN-1)** | **Preprocess Board** |

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-35.

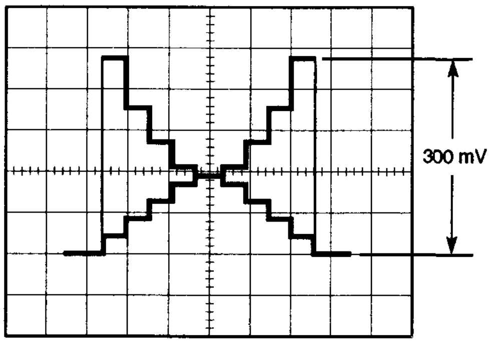


**Fig. 5-1-35**

- Change the Oscilloscope to TP102.
- Adjust VR101 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-36.
- Change the Oscilloscope to TP202.
- Adjust VR201 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-36.
- Change the Oscilloscope to TP302.
- Adjust VR301 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-36.

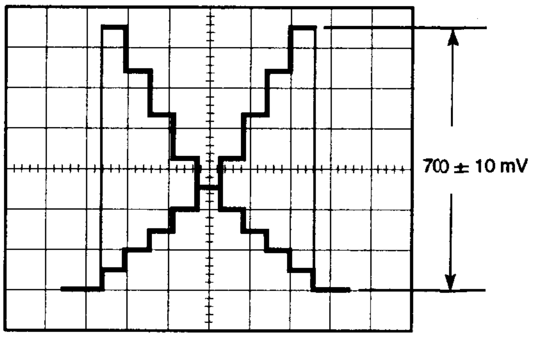


**Fig. 5-1-36**

### (22) Superposition Shading Adjustment

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB**.
- Cap on the Lens.

### (22)-1 H Top Shading Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP106 (R GAMMA)** | **Preprocess Board** |
| | **TP206 (G GAMMA)** | **Preprocess Board** |
| | **TP306 (B GAMMA)** | **Preprocess Board** |
| **Adjust:** | **VR1 (H TOP SHADING)** | **Preprocess Board** |
| | **VR5 (R H TOP SHADING)** | **Preprocess Board** |
| | **VR9 (G H TOP SHADING)** | **Preprocess Board** |
| | **VR13 (B H TOP SHADING)** | **Preprocess Board** |

- Connect the Oscilloscope to TP206 and triggered at H rate.

- Adjust VR9 so that the shading portion level becomes flat level as shown in Fig. 5-1-37.
- Adjust VR1 so that the H Top portion becomes flat level.
- Change the Oscilloscope to TP106 and triggered at H rate.
- Adjust VR5 so that the shading portion level becomes flat level as shown in Fig. 5-1-37.
- Change the Oscilloscope to TP306 and triggered at H rate.
- Adjust VR13 so that the shading portion level becomes flat level as shown in Fig. 5-1-37.

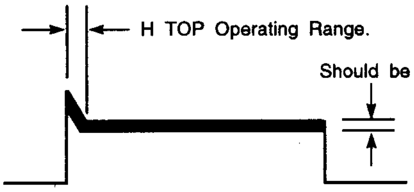


Fig. 5-1-37

- Set VR1 becomes minimum position of the effective range of the resistance.
  **Note:** Do not set non-resistance area of VR1.

### (22)-2 V Top Shading Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP106 (R GAMMA)** | **Preprocess Board** |
| | **TP206 (G GAMMA)** | **Preprocess Board** |
| | **TP306 (B GAMMA)** | **Preprocess Board** |
| **Adjust:** | **VR2 (V TOP SHADING)** | **Preprocess Board** |
| | **VR6 (R V TOP SHADING)** | **Preprocess Board** |
| | **VR10 (G V TOP SHADING)** | **Preprocess Board** |
| | **VR14 (B V TOP SHADING)** | **Preprocess Board** |

- Connect the Oscilloscope to TP206 and triggered at V rate.
- Adjust VR10 so that the shading portion level becomes flat level as shown in Fig. 5-1-38.
- Adjust VR2 so that the V Top portion becomes flat level.
- Change the Oscilloscope to TP106 and triggered at V rate.
- Adjust VR6 so that the shading portion level becomes flat level as shown in Fig. 5-1-38.
- Change the Oscilloscope to TP306 and triggered at V rate.
- Adjust VR14 so that the shading portion level becomes flat level as shown in Fig. 5-1-38.

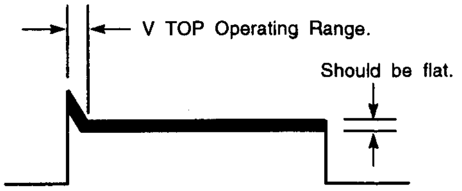


Fig. 5-1-38

- Set VR2 becomes minimum position of the effective range of the resistance.
  **Note:** Do not set non-resistance area of VR2.

### (22)-3 H Shading (SAW) Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP106 (R GAMMA)** | **Preprocess Board** |
| | **TP206 (G GAMMA)** | **Preprocess Board** |
| | **TP306 (B GAMMA)** | **Preprocess Board** |
| **Adjust:** | **VR3 (R H SHADING (SAW))** | **Preprocess Board** |
| | **VR7 (G H SHADING (SAW))** | **Preprocess Board** |
| | **VR11 (B H SHADING (SAW))** | **Preprocess Board** |

- Connect the Oscilloscope to TP106 and triggered at H rate.
- Adjust VR3 so that the shading portion level becomes flat level as shown in Fig. 5-1-39.
- Change the Oscilloscope to TP206 and triggered at H rate.
- Adjust VR7 so that the shading portion level becomes flat level as shown in Fig. 5-1-39.
- Change the Oscilloscope to TP306 and triggered at H rate.
- Adjust VR11 so that the shading portion level becomes flat level as shown in Fig. 5-1-39.

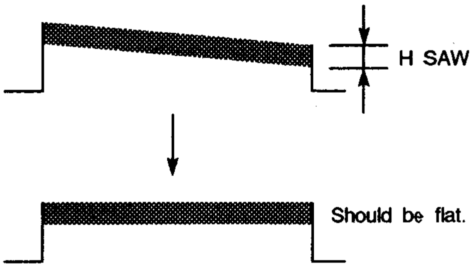


Fig. 5-1-39

### (22)-4 V Shading (SAW) Adjustment

**Test Point: TP106 (R GAMMA) Preprocess Board**
**TP206 (G GAMMA) Preprocess Board**
**TP306 (B GAMMA) Preprocess Board**
**Adjust: VR4 (R V SHADING (SAW)) Preprocess Board**
**VR8 (G V SHADING (SAW)) Preprocess Board**
**VR12 (B V SHADING (SAW)) Preprocess Board**

- Connect the Oscilloscope to TP106 and triggered at V rate.
- Adjust VR4 so that the shading portion level becomes flat level as shown in Fig. 5-1-40.
- Change the Oscilloscope to TP206 and triggered at V rate.
- Adjust VR8 so that the shading portion level becomes flat level as shown in Fig. 5-1-40.
- Change the Oscilloscope to TP306 and triggered at V rate.
- Adjust VR12 so that the shading portion level becomes flat level as shown in Fig. 5-1-40.

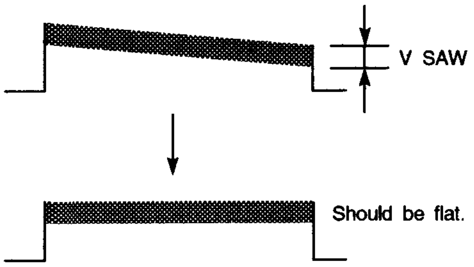


**Fig. 5-1-40**

### (23) Pedestal Fine Adjustment

**Test Point: VIDEO OUT CONNECTOR Rear Panel**
**Adjust: VR103 (R PULSE CANCEL) Preprocess Board**
**VR106 (R PED) Preprocess Board**
**VR203 (G PULSE CANCEL) Preprocess Board**
**VR206 (G PED) Preprocess Board**
**VR303 (B PULSE CANCEL) Preprocess Board**
**VR306 (B PED) Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Cap on the Lens.
- Adjust VR106 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR206 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR306 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Set the **GAIN** to **18dB**.
- Adjust VR103 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR203 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR303 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.

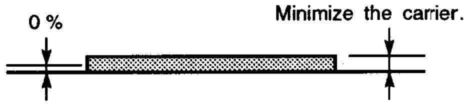


**Fig. 5-1-41**

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.

### (24) Shutter Pulse Cancel Fine Adjustment

**Test Point: VIDEO OUT CONNECTOR Rear Panel**
**Adjust: VR102 (R SHUTTER) Preprocess Board**
**VR202 (G SHUTTER) Preprocess Board**
**VR302 (B SHUTTER) Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB** and the **SHUTTER** to **1/100**.
- Cap on the Lens.
- Adjust VR102 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-42.
- Adjust VR202 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-42.
- Adjust VR302 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-42.

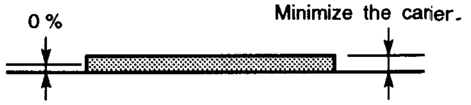


**Fig. 5-1-42**

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.
- After adjustment, set the **GAIN** to **0dB** and the **SHUTTER** to **OFF**.

### (25) 0dB/18dB Gain Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP201 (G IN)** | **Preprocess Board** |
| | **TP103 (R GAIN-2)** | **Preprocess Board** |
| | **TP203 (G GAIN-2)** | **Preprocess Board** |
| | **TP303 (B GAIN-2)** | **Preprocess Board** |
| **Adjust:** | **VR104 (R GAIN-2)** | **Preprocess Board** |
| | **VR105 (R 18dB GAIN)** | **Preprocess Board** |
| | **VR204 (G GAIN-2)** | **Preprocess Board** |
| | **VR205 (G 18dB GAIN)** | **Preprocess Board** |
| | **VR304 (B GAIN-2)** | **Preprocess Board** |
| | **VR305 (B 18dB GAIN)** | **Preprocess Board** |

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-43.

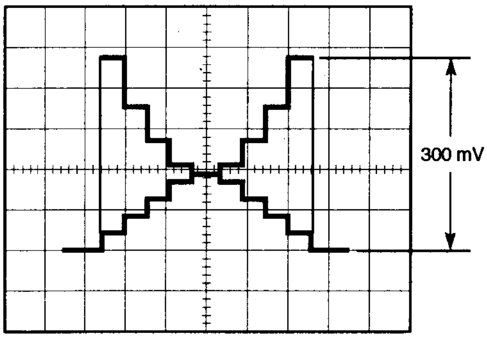


Fig. 5-1-43

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Change the Oscilloscope to TP203.
- Confirm that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
  If not, readjust VR204.
- Change the Oscilloscope to TP103.
- Confirm that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
  If not, readjust VR104.
- Change the Oscilloscope to TP303.
- Confirm that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
  If not, readjust VR304.
- Mount the ND-8 Filter on the Lens.
- Change the Oscilloscope to TP203.
- Set the **GAIN** to **18dB**.
- Adjust VR205 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
- Remove the ND-8 Filter.
- Confirm that the Video signal becomes 700 ± 10mV as shown in Fig. 5-1-44.
  If not readjust VR204.
- Repeat adjustment between **0dB** Gain and **18dB** Gain until satisfactory.
- Set the **GAIN** to **18dB**.
- Change the Oscilloscope to TP203.
- Set the Lens Iris so that the Video signal level becomes 700± 10 mV as shown in Fig. 5-1-44.
- Change the Oscilloscope to TP103.
- Confirm that the Video signal becomes 700 ± 10mV as shown in Fig. 5-1-44.
  If not readjust VR105.
- Repeat adjustment between **0dB** Gain and **18dB** Gain until satisfactory.
- Change the Oscilloscope to TP303.
- Confirm that the Video signal becomes 700 ± 10mV, if not readjust VR305.
- Repeat adjust between **0dB** Gain and **18dB** Gain until satisfactory.

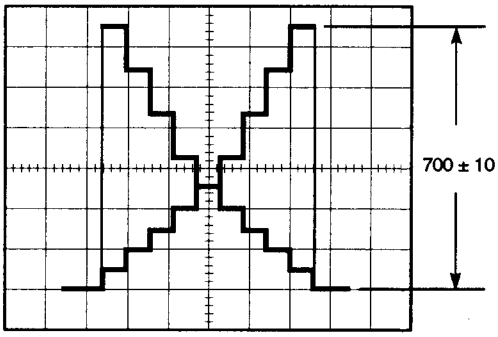


Fig. 5-1-44

### (26) White Balance Adjustment

| | | |
|---|---|---|
| **Test Point:** | **VIDEO OUT CONNECTOR** | **Rear Panel** |
| **Adjust:** | **VR111 (2000°K WB)** | **Preprocess Board** |
| | **VR311 (10000°K WB)** | **Preprocess Board** |

- Press the **UP (ABC)** switch on the Rear Panel.
- Set the Colour Temperature of the Lighting to 3,200 °K.
- Press the **ITEM (AWC)** switch.
- Set the Gain Control of the Vectorscope to maximum.
- Confirm that the vector positions at the center of the Vectorscope.
- Change the Colour Temperature of the Lighting to 2,000 °K.
- Press the **ITEM (AWC)** switch.
- Adjust VR111 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-45.
- Change the Colour Temperature of the Lighting to 10,000 °K.
- Press the **ITEM (AWC)** switch.
- Adjust VR311 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-45.

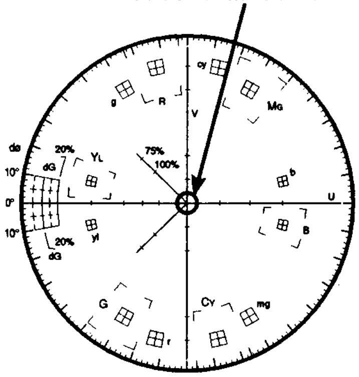


Fig. 5-1-45

### (27) Knee Adjustment

| | | |
|---|---|---|
| **Test Point:** | **VIDEO OUT CONNECTOR** | **Rear panel** |
| | **TP203 (G GAIN-2)** | **Preprocess Board** |
| **Adjust:** | **VR107 (R KNEE)** | **Preprocess Board** |
| | **VR207 (G KNEE)** | **Preprocess Board** |
| | **VR307 (B KNEE)** | **Preprocess Board** |

- Set the Colour Temperature of the Lighting to 3,200 °K.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP203.
- Set the Lens Iris so that the Video signal level becomes 100 %.
- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Set the **GAIN** to **9dB**.
- Set the Gain Control of the Vectorscope to maximum.
- Adjust VR107 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-46.
- Adjust VR207 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-46.
- Adjust VR307 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-46.

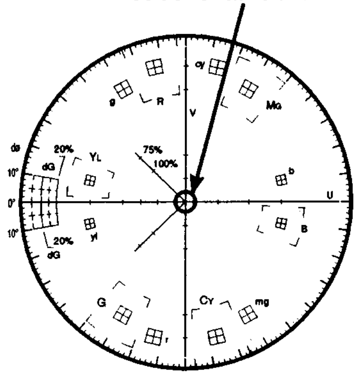


Fig. 5-1-46

- Set the **GAIN** to **0DB**.
- Open the Lens Iris one click (1F step).
- Confirm that the vector positions at the center of the Vectorscope.

## 5.2. Adjustment Procedure for WV-PS550

Refer to the Location of the Test Points and Adjusting Controls on page 62.

### (1) 89.0V Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP1 (89.0V)** | **Power Board** |
| **Adjustment:** | **VR1 (89.0V)** | **Power Board** |

- Connect the Digital Voltmeter to TP1 .
- Adjust VR1 to obtain 89.0 ± 0.1V.

■ When adjsting the Modulator Board, use Extension Board (Part No. : YWV0EA0158AN) as shown in page 39.

### (2) Video Gain 1 Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP1 (VIDEO)** | **Modulator Board** |
| **Adjust:** | **VR1 (VIDEO GAIN)** | **Modulator Board** |

- Connect the Oscilloscope to TP1.
- Trigger the Oscilloscope at H rate.
- Adjust VR1 so that the Video signal level becomes 0.8 ± 0.01 Vp-p as shown in the Fig. 5-2-1.

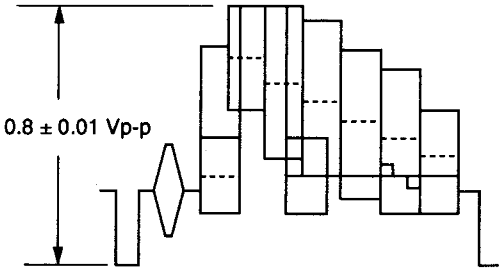


Fig. 5-2-1

### (3) Video Gain 2 Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP10 (MPX)** | **Modulator Board** |
| **Adjust:** | **VR2 (MPX GAIN)** | **Modulator Board** |

- Connect the Oscilloscope to TP10.
- Trigger the Oscilloscope at H rate.
- Adjust VR2 so that the Video signal level becomes 3.0 ± 0.05 Vp-p as shown in the Fig. 5-2-2.

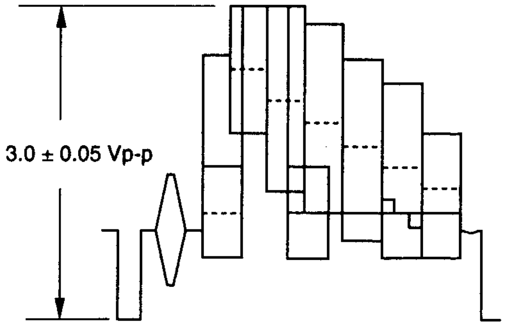


Fig. 5-2-2

### (4) Command Modulation Adjustment

**Test Point:** **TP10 (MPX)** **Modulator Board**

**Adjust:** **VR5 (COMMAND CARRIER-1)** **Modulator Board**

**VR6 (COMMAND CARRIER-2)** **Modulator Board**

- Connect the Oscilloscope to TP10.
- Trigger the Oscilloscope at V rate.
- Set VR5 to its mechanical center position and VR3 to fully clockwise.
- Adjust VR6 so that the carrier on the signal becomes minimum as shown in the Fig. 5-2-3.

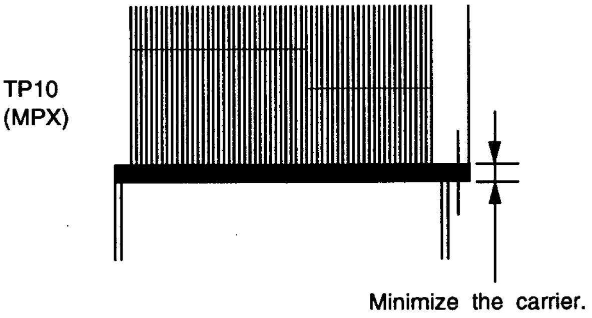


Fig. 5-2-3

### (5) Command Level Adjustment

**Test Point:** **TP10 (MPX)** **Modulator Board**

**Adjust:** **VR3 (COMMAND LEVEL)** **Modulator Board**

- Connect the Oscilloscope to TP10.
- Trigger the Oscilloscope at V rate.
- Adjust VR3 so that the carrier on the Command signal becomes 0.5 ± 0.01 Vp-p as shown in the Fig. 5-2-4.

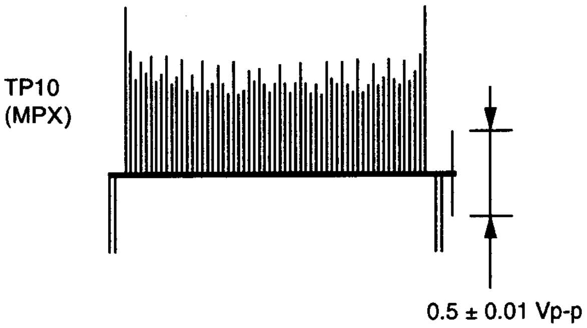


Fig. 5-2-4

### (6) AGC Pulse Adjustment

**Test Point:** **TP3 (V-SYNC)** **Modulator Board**

**TP4 (AGC PULSE)** **Modulator Board**

**Adjust:** **VR4 (AGC PULSE PHASE)** **Modulator Board**

**VR11 (AGC PULSE WIDTH)** **Modulator Board**

- Connect CH1 of the Oscilloscope to TP3 and CH2 of the Oscilloscope to TP4, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the AGC Pulse period on the Oscilloscope.
- Adjust VR4 so that the AGC Pulse Phase becomes 200 ± 5 μsec. as shown in the Fig. 5-2-5.
- Adjust VR11 so that the AGC Pulse Width becomes 100 ± 5 μsec. as shown in the Fig. 5-2-5.

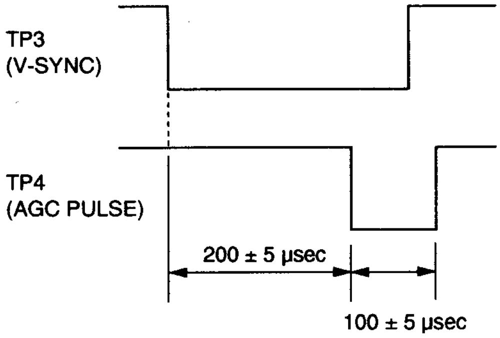


Fig. 5-2-5

### (7) AGC Cancel Adjustment

**Test Point:** **TP3 (V-SYNC)** **Modulator Board**

**TP5 (AGC CANCEL)** **Modulator Board**

**Adjust:** **VR7 (AGC CANCEL)** **Modulator Board**

- Connect CH1 of the Oscilloscope to TP3 and CH2 of the Oscilloscope to TP5, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the AGC Cancel signal period on the Oscilloscope.
- Adjust VR7 so that the AGC Cancel signal phase becomes 340 ± 5 μsec. as shown in the Fig. 5-2-6.

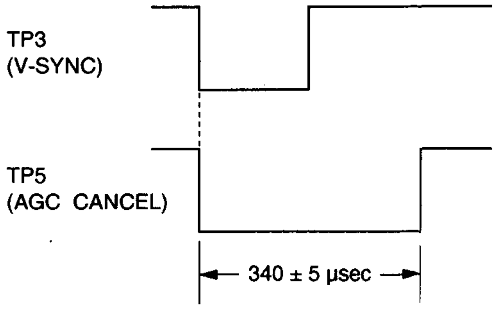


Fig. 5-2-6

### (8) Data Cancel Pulse Adjustment

**Test Point:** **TP3 (V-SYNC)** **Modulator Board**
**TP6 (DATA CANCEL)** **Modulator Board**
**Adjust:** **VR8 (DATA CANCEL)** **Modulator Board**

- Connect two probes of the Oscilloscope to TP3 and TP6, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the Data Cancel Pulse period on the Oscilloscope.
- Adjust VR8 so that the Data Cancel Pulse Phase becomes 100 ± 5 µsec. as shown in the Fig. 5-2-7.

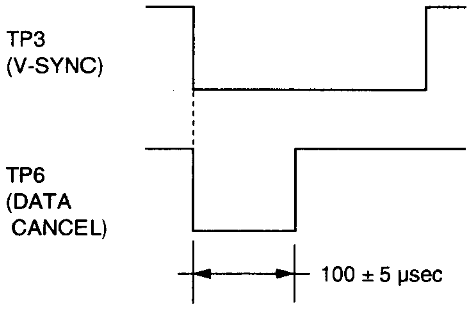


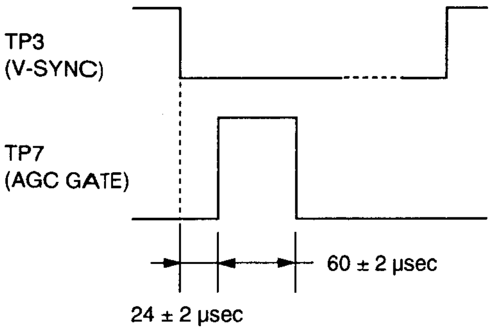
**Fig. 5-2-7**

### (9) AGC Gate Pulse Adjustment

**Test Point:** **TP3 (V-SYNC)** **Modulator Board**
**TP7 (AGC GATE)** **Modulator Board**
**Adjust:** **VR9 (AGC GATE PHASE )**
**Modulator Board**
**VR10 (AGC PULSE)** **Modulator Board**

- Connect two probes of the Oscilloscope to TP3 and TP7, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the AGC Gate period on the Oscilloscope.
- Adjust VR9 so that the AGC Gate Pulse Phase becomes 24 ± 2 µsec. as shown in the Fig. 5-2-8.
- Adjust VR10 so that the AGC Gate Pulse Width becomes 60 ± 2 µsec. as shown in the Fig. 5-2-8.

**Fig. 5-2-8**



### (10) Confirmation of 17 MHz Carrier Level

**Test Point:** **TP8 (17MHz)** **Modulator Board**

- Connect the Oscilloscope to TP8.
- Confirm that the 17MHz Carrier level becomes 800 mV p-p as shown in the Fig. 5-2-9.

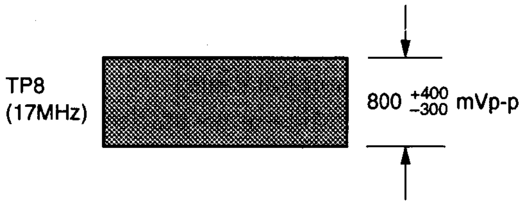


**Fig. 5-2-9**

■ When adjsting the Demodulator Board, use Extension Board (Part No. : YWV0EA0158AN) as shown in page 39.

### (11) Command AGC Pulse Adjustment

**Test Point:** **TP5 (COMMAND AGC)**
**Demodulator Board**
**Adjust:** **VR4 (COMMAND LEVEL)**
**Demodulator Board**

- Connect the Oscilloscope to TP5.
- Adjust VR4 so that the Command level of the first AGC signal becomes 0.45 ± 0.01 Vp-p as shown in the Fig. 4-2-10.

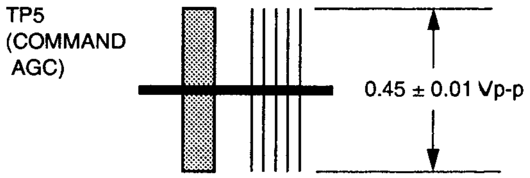


**Fig. 4-2-10**

### (12) Confirmation of Command AGC DC Level

**Test Point:** **TP6 (COMMAND AGC DC)**
**Demodulator Board**

- Connect the Oscilloscope to TP6.
- Set the Oscilloscope to DC mode.
- Confirm that the DC level of the Command AGC DC signal becomes less than 2.5 V DC as shown in the Fig. 4-2-11.

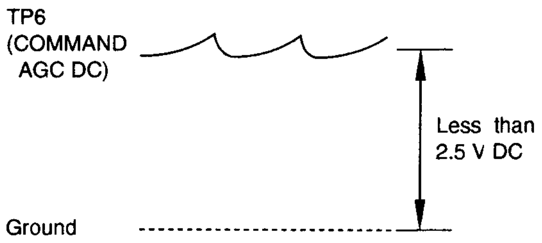


**Fig. 4-2-11**

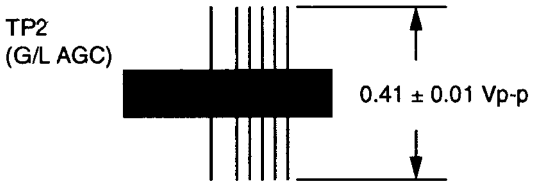
### 13) G/L AGC Level Adjustment

**Test Point:** **TP2 (G/L AGC)** **Demodulator Board**

**Adjust:** **VR1 (G/L LEVEL)** **Demodulator Board**

- Supply the Black Burst signal or Colour Bar signal to the Gen-Lock Input Connector of the WV-RC700A.
- Connect the Oscilloscope to TP2.
- Adjust VR1 so that the Command level of the Gen-Lock signal becomes 0.41 ± 0.01 Vp-p as shown in the Fig. 4-2-12.

**Fig. 4-2-12**



### (14) Confirmation of G/L AGC DC Level

**Test Point:** **TP3 (G/L AGC DC)** **Demodulator Board**

- Connect the Oscilloscope to TP3.
- Set the Oscilloscope to DC mode.
- Confirm that the DC level of the G/L AGC signal becomes less than 3.0 V DC as shown in the Fig. 4-2-13.

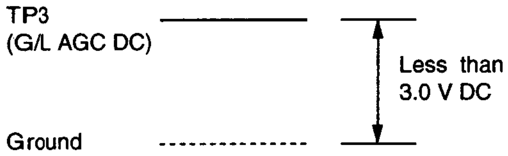


**Fig. 4-2-13**

### (15) G/L Sync Level Adjustment

**Test Point:** **Pin 22 (GEN-LOCK OUT)**
**Extension Board**

**Adjust:** **VR2 (G/L SYNC LEVEL)**
**Demodulator Board**

- Supply the Black Burst signal or Colour Bar signal to the Gen-Lock Input Connector of the WV-RC700A.
- Connect the Oscilloscope to Pin 22 on the Extension Board.
- Adjust VR2 so that the Sync level of the Gen-Lock signal becomes 0.5 ± 0.02 Vp-p as shown in the Fig. 4-2-14.

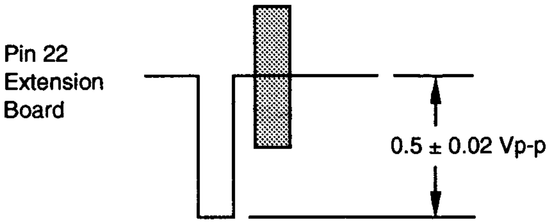


**Fig. 4-2-14**

### (16) G/L Burst Level Adjustment

**Test Point:** **Pin 22 (GEN-LOCK OUT)**
**Extension Board**

**Adjust:** **CT1 (G/L DOM)** **Demodulator Board**
**VR3 (G/L BURST LEVEL)**
**Demodulator Board**

- Supply the Black Burst signal or Colour Bar signal to the Gen-Lock Input Connector of the WV-RC700A.
- Connect the Oscilloscope to Pin 22 on the Extension Board.
- Adjust CT1 so that the Burst level of the Gen-Lock signal becomes maximum.
- Adjust VR3 so that the Burst level of the Gen-Lock signal becomes 0.5 ± 0.02 Vp-p as shown in the Fig. 4-2-15.

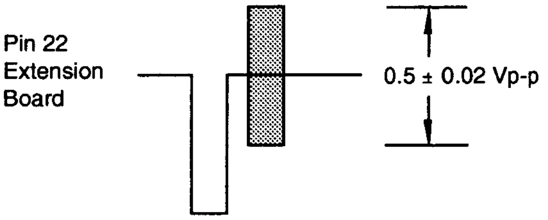


**Fig. 4-2-15**

■ **Before start to adjust the Audio Board, two switches on the Audio board are as follows:**

SW1: Audio position
SW2: ON position

### (17) 11.2MHz Adjustment

**Test Point:** **TP2 (11.2MHz)** **Audio Board**

**Adjust:** **L2 (11.2MHz)** **Audio Board**

- Connect the Oscilloscope to TP2.
- Adjust L2 so that the carrier level becomes maximum.
- Connect the Frequency Counter to TP2.
- Adjust L2 so that the carrier frequency becomes 11.202 ± 0.001 MHz.

### (18) Modulator DC Level Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP3 (5.0V)** | **Audio Board** |
| **Adjust:** | **L3 (5.0V)** | **Audio Board** |

- Connect the Digital Voltmeter to TP3.
- Adjust L3 to obtain 5.0 ± 0.1 V.

### (19) Intercom MPX Carrier Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP10 (MPX)** | **Modulator Board** |
| **Adjust:** | **VR1 (MPX CARRIER)** | **Audio Board** |

- Set SW2 on the Audio Board to ON.
- Connect the Oscilloscope to TP10 on the Modulator Board.
- Adjust VR1 so that the carrier level becomes 0.6 ± 0.05 Vp-p as shown in the Fig. 4-2-16.

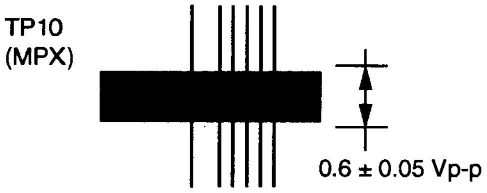
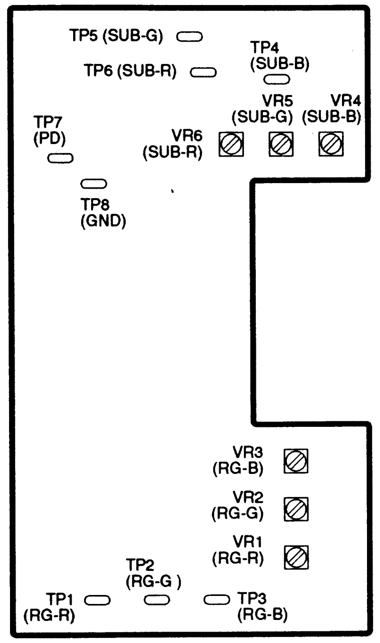


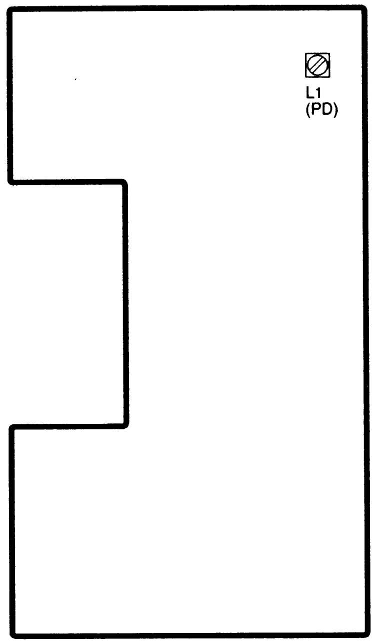
**Fig. 4-2-16**

# LOCATION OF TEST POINTS AND ADJUSTING CONTROLS (WV-E550E)

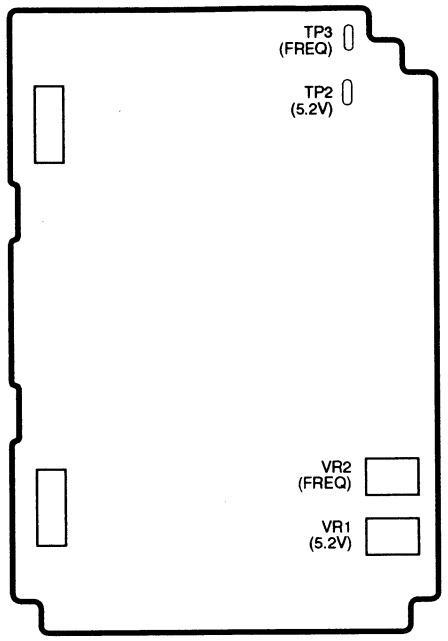
**DRIVE BOARD (PATTERN SIDE)**


TP5 (SUB-G)
TP6 (SUB-R)
TP4 (SUB-B)
VR5 (SUB-G)
VR4 (SUB-B)
TP7 (PD)
VR6 (SUB-R)
TP8 (GND)
VR3 (RG-B)
VR2 (RG-G)
VR1 (RG-R)
TP2 (RG-G )
TP1 (RG-R)
TP3 (RG-B)

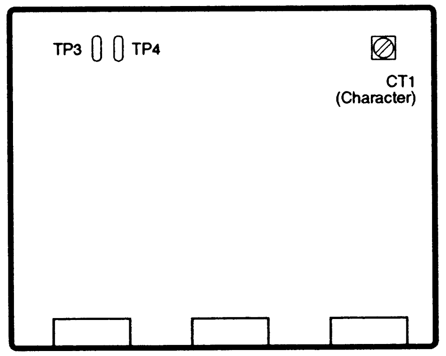
**DRIVE BOARD (COMPONENT SIDE)**



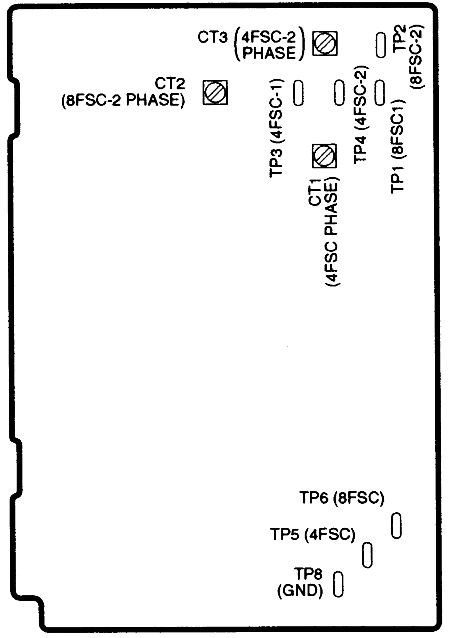
**POWER BOARD (PATTERN SIDE)**

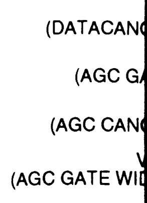

TP3 (FREQ)
TP2 (5.2V)
VR2 (FREQ)
VR1 (5.2V)

**SYSTEM CONTROL BOARD (PATTERN SIDE)**

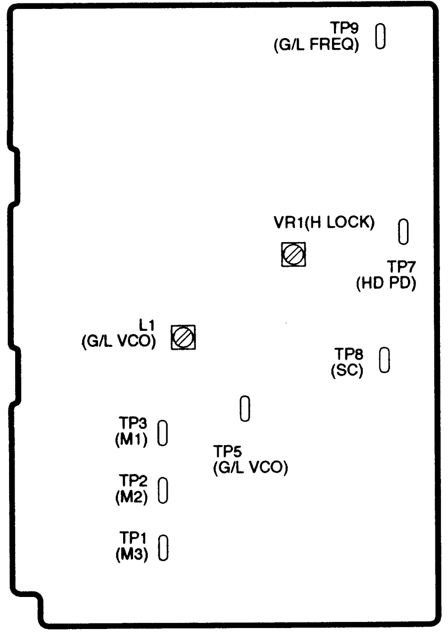

TP3
TP4
CT1 (Character)

**DIGITAL PROCESS BOARD (COMPONENT SIDE)**

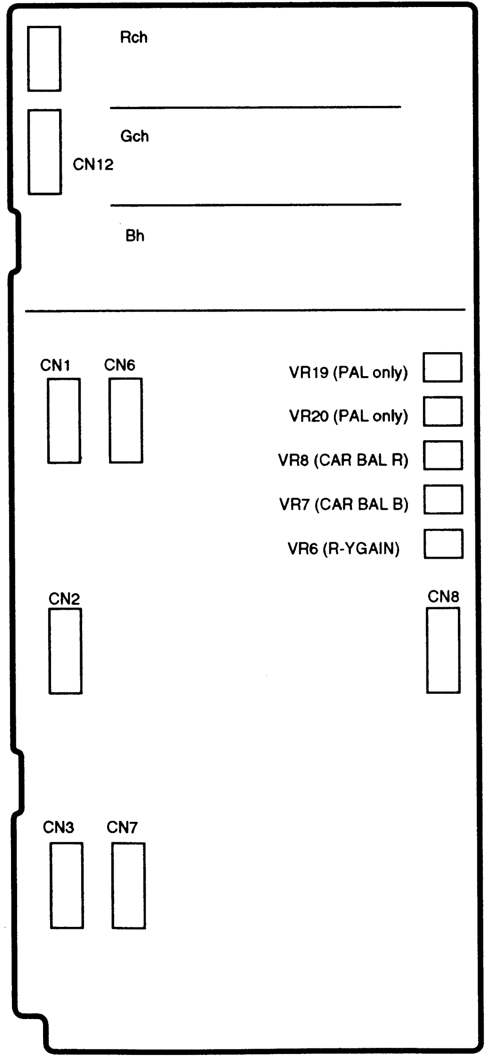

CT3 (4FSC-2 PHASE)
CT2 (8FSC-2 PHASE)
TP2 (8FSC-2)
TP3 (4FSC-1)
TP4 (4FSC-2)
TP1 (8FSC1)
CT1 (4FSC PHASE)
TP6 (8FSC)
TP5 (4FSC)
TP8 (GND)


(DATACAN
(AGC G
(AGC CAN
(AGC GATE WI

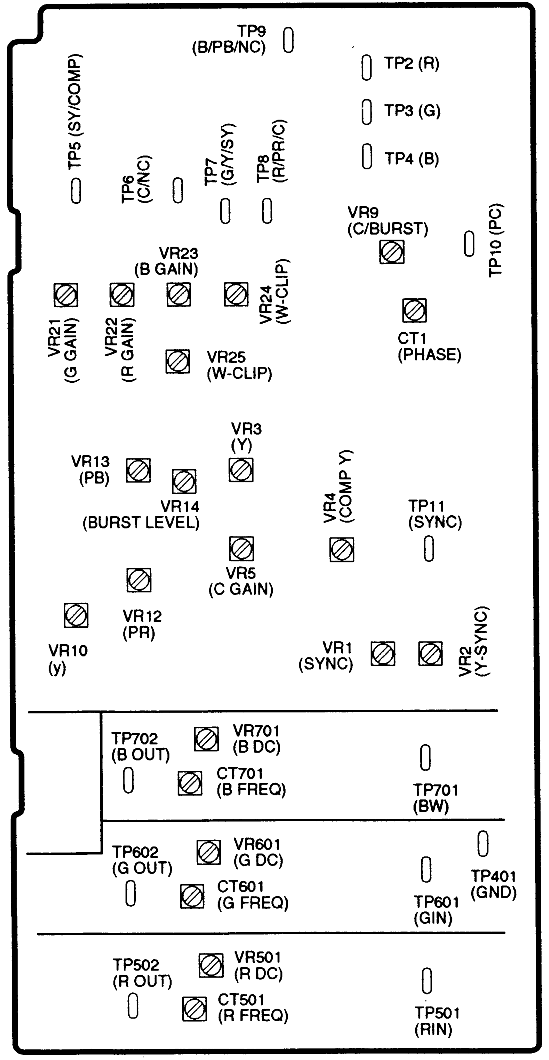
**SYNC BOARD (COMPONENT SIDE)**


TP9 (G/L FREQ)
VR1(H LOCK)
TP7 (HD PD)
L1 (G/L VCO)
TP8 (SC)
TP3 (M1)
TP5 (G/L VCO)
TP2 (M2)
TP1 (M3)

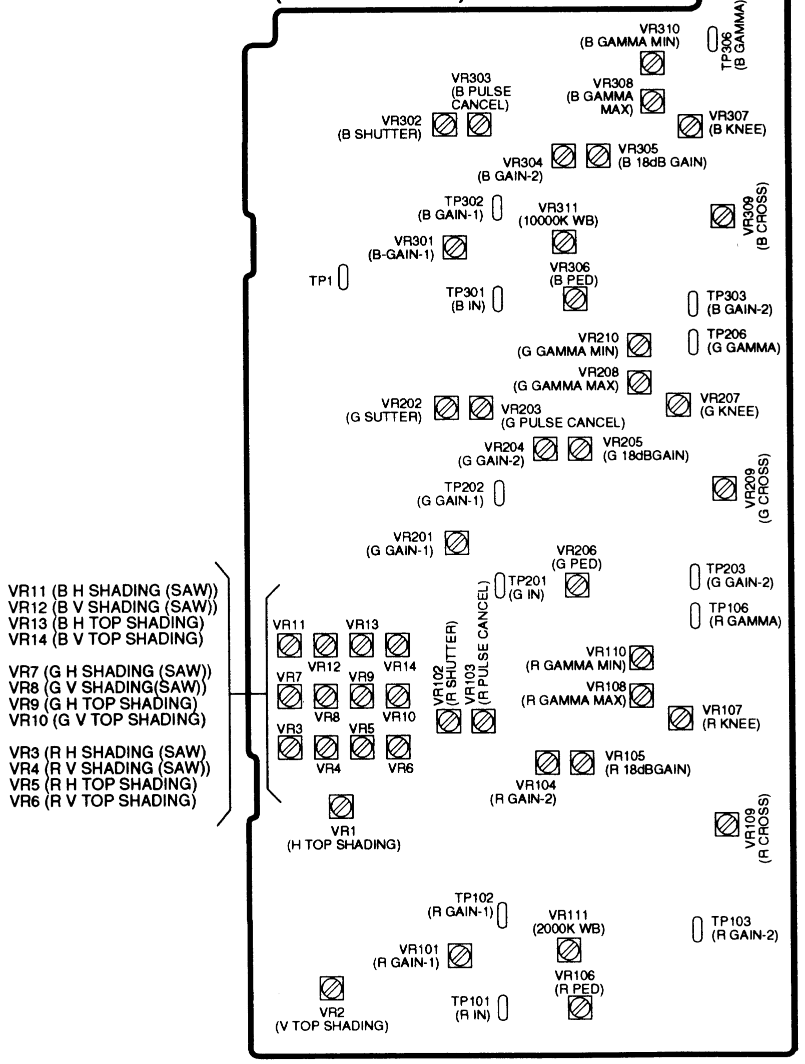
**PREAMP/ ENCODER BOARD (COMPONENT SIDE)**


Rch
Gch
CN12
Bh
CN1
CN6
VR19 (PAL only)
VR20 (PAL only)
VR8 (CAR BAL R)
VR7 (CAR BAL B)
VR6 (R-YGAIN)
CN2
CN8
CN3
CN7

**PREAMP/ENCODER BOARD (PATTERN SIDE)**

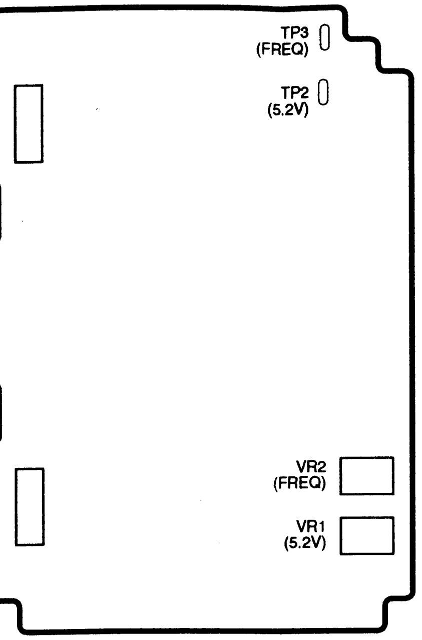

TP9 (B/PB/NC)
TP2 (R)
TP3 (G)
TP4 (B)
TP5 (SY/COMP)
TP6 (C/NC)
TP7 (G/Y/SY)
TP8 (R/PR/C)
VR9 (C/BURST)
TP10 (PC)
VR23 (B GAIN)
VR24 (W-CLIP)
VR21 (G GAIN)
VR22 (R GAIN)
VR25 (W-CLIP)
CT1 (PHASE)
VR3 (Y)
VR13 (PB)
VR14 (BURST LEVEL)
VR4 (COMP Y)
TP11 (SYNC)
VR5 (C GAIN)
VR12 (PR)
VR10 (y)
VR1 (SYNC)
VR2 (Y-SYNC)
TP702 (B OUT)
VR701 (B DC)
CT701 (B FREQ)
TP701 (BW)
TP602 (G OUT)
VR601 (G DC)
CT601 (G FREQ)
TP401 (GND)
TP601 (GIN)
TP502 (R OUT)
VR501 (R DC)
CT501 (R FREQ)
TP501 (RIN)

**PREPROCESS BOARD (PATTERN SIDE)**

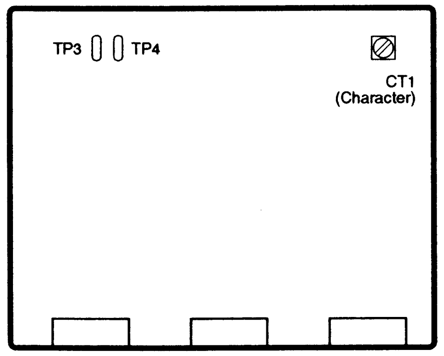

VR310 (B GAMMA MIN)
TP306 (B GAMMA)
VR303 (B PULSE CANCEL)
VR308 (B GAMMA MAX)
VR302 (B SHUTTER)
VR307 (B KNEE)
VR304 (B GAIN-2)
VR305 (B 18dB GAIN)
TP302 (B GAIN-1)
VR311 (10000K WB)
VR309 (B CROSS)
VR301 (B-GAIN-1)
TP1
VR306 (B PED)
TP301 (B IN)
TP303 (B GAIN-2)
VR210 (G GAMMA MIN)
TP206 (G GAMMA)
VR208 (G GAMMA MAX)
VR202 (G SUTTER)
VR203 (G PULSE CANCEL)
VR207 (G KNEE)
VR204 (G GAIN-2)
VR205 (G 18dBGAIN)
TP202 (G GAIN-1)
VR209 (G CROSS)
VR201 (G GAIN-1)
VR206 (G PED)
TP201 (G IN)
TP203 (G GAIN-2)
TP106 (R GAMMA)
VR11 (B H SHADING (SAW))
VR12 (B V SHADING (SAW))
VR13 (B H TOP SHADING)
VR14 (B V TOP SHADING)
VR7 (G H SHADING (SAW))
VR8 (G V SHADING(SAW))
VR9 (G H TOP SHADING)
VR10 (G V TOP SHADING)
VR3 (R H SHADING (SAW)
VR4 (R V SHADING (SAW))
VR5 (R H TOP SHADING)
VR6 (R V TOP SHADING)
VR11
VR13
VR12
VR14
VR7
VR9
VR8
VR10
VR3
VR5
VR4
VR6
VR102 (R SHUTTER)
VR103 (R PULSE CANCEL)
VR110 (R GAMMA MIN)
VR108 (R GAMMA MAX)
VR107 (R KNEE)
VR105 (R 18dBGAIN)
VR104 (R GAIN-2)
VR1 (H TOP SHADING)
VR109 (R CROSS)
TP102 (R GAIN-1)
VR111 (2000K WB)
TP103 (R GAIN-2)
VR101 (R GAIN-1)
VR106 (R PED)
VR2 (V TOP SHADING)
TP101 (R IN)

# INTS AND ADJUSTING CONTROLS (WV-E550E)

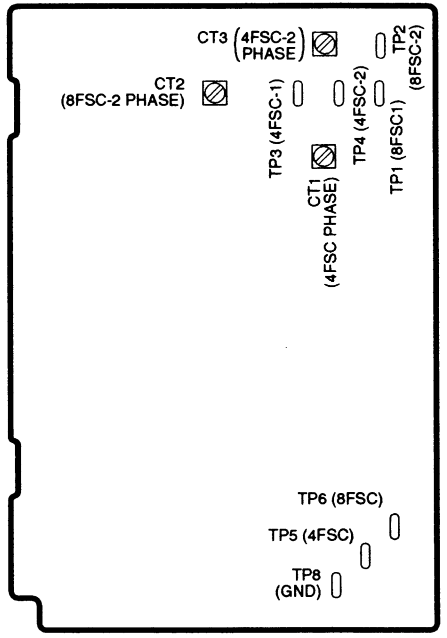
### POWER BOARD
### (PATTERN SIDE)


TP3
(FREQ)
TP2
(5.2V)
VR2
(FREQ)
VR1
(5.2V)

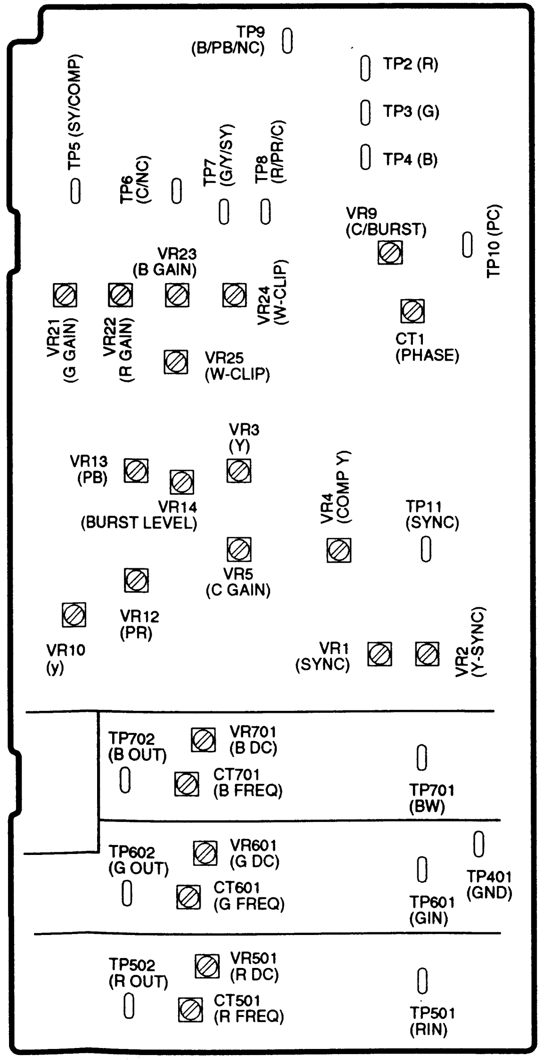
### SYSTEM CONTROL BOARD
### (PATTERN SIDE)


TP3
TP4
CT1
(Character)

### DIGITAL PROCESS BOARD
### (COMPONENT SIDE)


CT3 (4FSC-2 PHASE)
CT2
(8FSC-2 PHASE)
TP2
(8FSC-2)
TP3 (4FSC-1)
TP4 (4FSC-2)
TP1 (8FSC1)
CT1
(4FSC PHASE)
TP6 (8FSC)
TP5 (4FSC)
TP8
(GND)

### PREAMP/ENCODER BOARD
### (PATTERN SIDE)

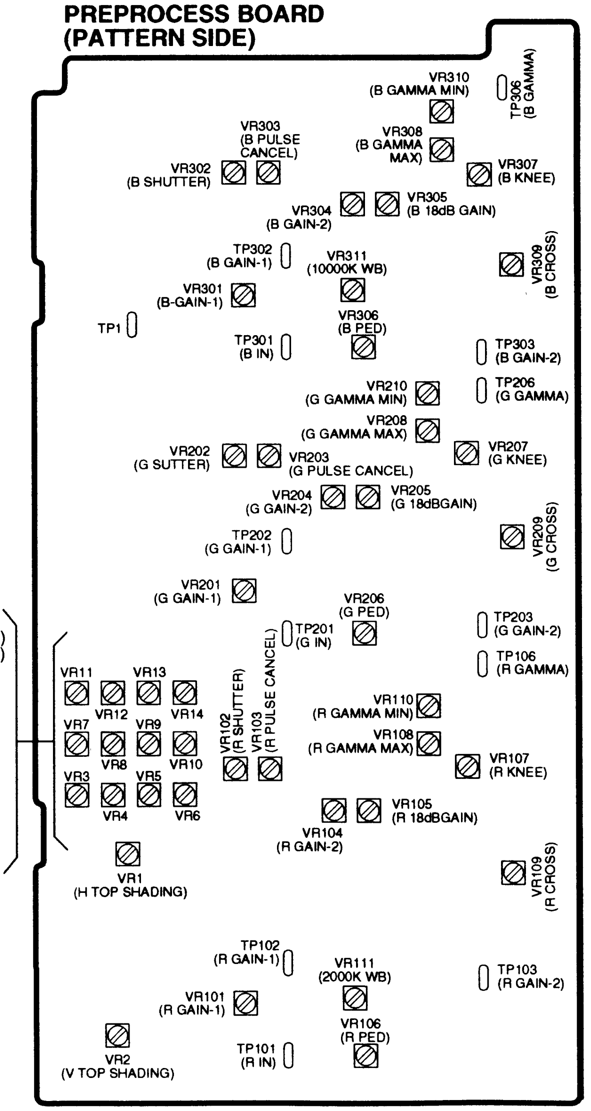

TP9
(B/PB/NC)
TP2 (R)
TP3 (G)
TP4 (B)
TP5 (SY/COMP)
TP6
(C/NC)
TP7
(G/Y/SY)
TP8
(R/PR/C)
VR9
(C/BURST)
TP10 (PC)
VR23
(B GAIN)
VR21
(G GAIN)
VR22
(R GAIN)
VR24
(W-CLIP)
VR25
(W-CLIP)
CT1
(PHASE)
VR3
(Y)
VR13
(PB)
VR14
(BURST LEVEL)
VR4
(COMP Y)
TP11
(SYNC)
VR5
(C GAIN)
VR12
(PR)
VR10
(y)
VR1
(SYNC)
VR2
(Y-SYNC)
TP702
(B OUT)
VR701
(B DC)
CT701
(B FREQ)
TP701
(BW)
TP602
(G OUT)
VR601
(G DC)
CT601
(G FREQ)
TP601
(GIN)
TP401
(GND)
TP502
(R OUT)
VR501
(R DC)
CT501
(R FREQ)
TP501
(RIN)

### PREPROCESS BOARD
### (PATTERN SIDE)

VR11 (B H SHADING (SAW))
VR12 (B V SHADING (SAW))
VR13 (B H TOP SHADING)
VR14 (B V TOP SHADING)

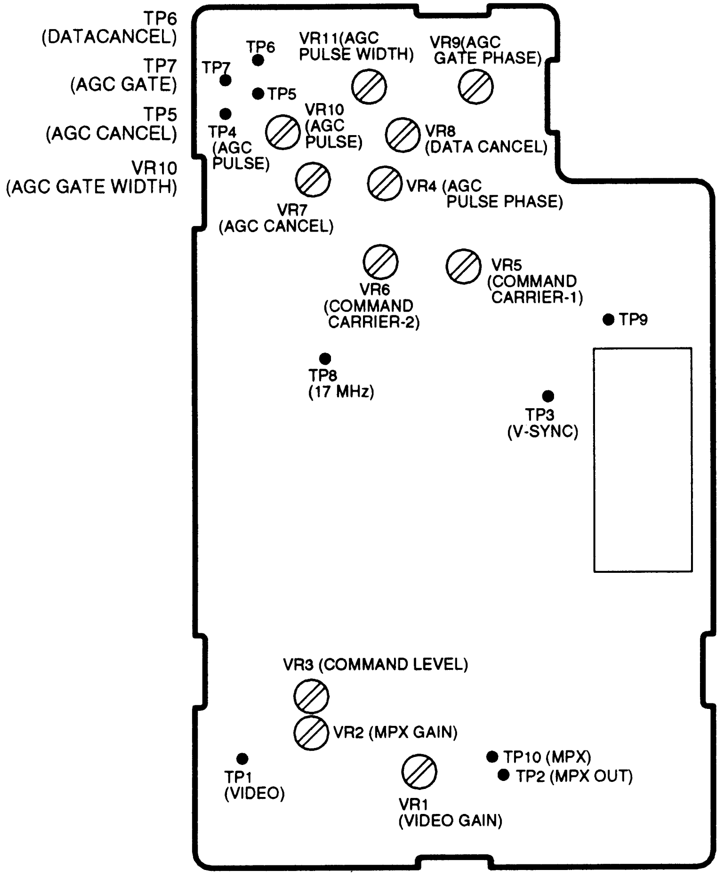
VR7 (G H SHADING (SAW))
VR8 (G V SHADING(SAW))
VR9 (G H TOP SHADING)
VR10 (G V TOP SHADING)

VR3 (R H SHADING (SAW)
VR4 (R V SHADING (SAW))
VR5 (R H TOP SHADING)
VR6 (R V TOP SHADING)

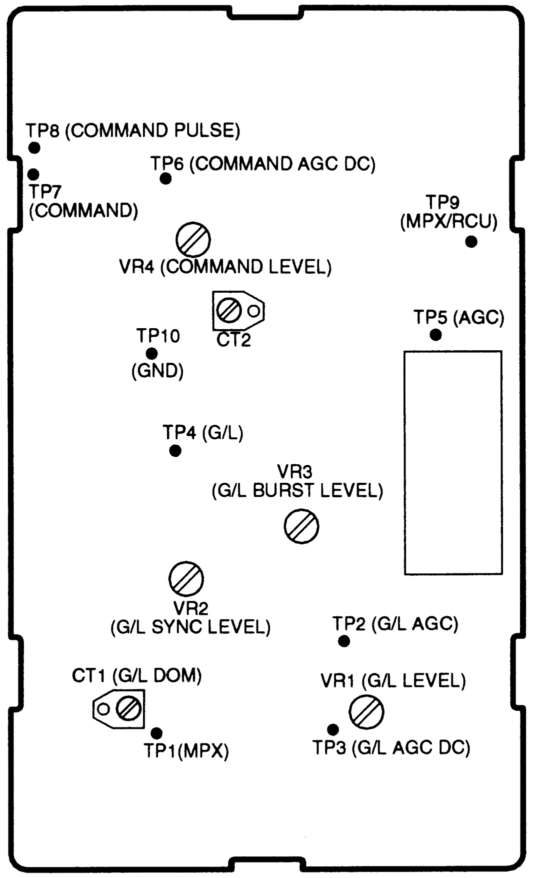

VR310
(B GAMMA MIN)
TP306
(B GAMMA)
VR303
(B PULSE CANCEL)
VR308
(B GAMMA MAX)
VR302
(B SHUTTER)
VR307
(B KNEE)
VR304
(B GAIN-2)
VR305
(B 18dB GAIN)
TP302
(B GAIN-1)
VR311
(10000K WB)
VR309
(B CROSS)
VR301
(B-GAIN-1)
TP1
VR306
(B PED)
TP301
(B IN)
TP303
(B GAIN-2)
VR210
(G GAMMA MIN)
TP206
(G GAMMA)
VR208
(G GAMMA MAX)
VR202
(G SUTTER)
VR203
(G PULSE CANCEL)
VR207
(G KNEE)
VR204
(G GAIN-2)
VR205
(G 18dBGAIN)
TP202
(G GAIN-1)
VR209
(G CROSS)
VR201
(G GAIN-1)
VR206
(G PED)
TP201
(G IN)
TP203
(G GAIN-2)
TP106
(R GAMMA)
VR11
VR13
VR12
VR14
VR7
VR9
VR8
VR10
VR3
VR5
VR4
VR6
VR102
(R SHUTTER)
VR103
(R PULSE CANCEL)
VR110
(R GAMMA MIN)
VR108
(R GAMMA MAX)
VR107
(R KNEE)
VR105
(R 18dBGAIN)
VR104
(R GAIN-2)
VR1
(H TOP SHADING)
VR109
(R CROSS)
TP102
(R GAIN-1)
VR111
(2000K WB)
TP103
(R GAIN-2)
VR101
(R GAIN-1)
VR106
(R PED)
VR2
(V TOP SHADING)
TP101
(R IN)

# (WV-PS550)

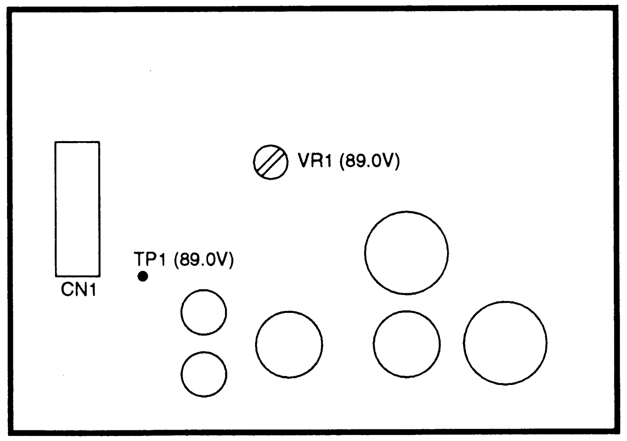
### MODULATOR BOARD
### (COMPONENT SIDE)


TP6
(DATACANCEL)
TP7
(AGC GATE)
TP5
(AGC CANCEL)
VR10
(AGC GATE WIDTH)
TP6
TP7
TP5
TP4
(AGC
PULSE)
VR11(AGC
PULSE WIDTH)
VR9(AGC
GATE PHASE)
VR10
(AGC
PULSE)
VR8
(DATA CANCEL)
VR4 (AGC
PULSE PHASE)
VR7
(AGC CANCEL)
VR6
(COMMAND
CARRIER-2)
VR5
(COMMAND
CARRIER-1)
TP9
TP8
(17 MHz)
TP3
(V-SYNC)
VR3 (COMMAND LEVEL)
VR2 (MPX GAIN)
TP1
(VIDEO)
VR1
(VIDEO GAIN)
TP10 (MPX)
TP2 (MPX OUT)

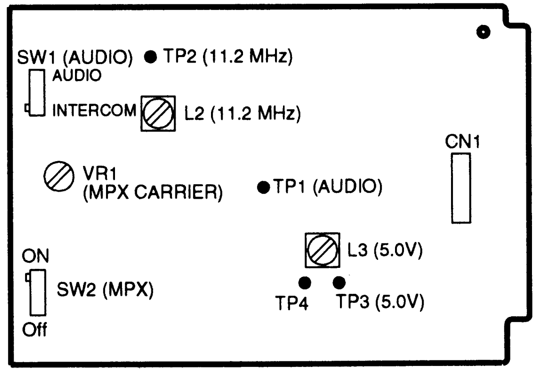
### DEMODULATOR BOARD
### (COMPONENT SIDE)


TP8 (COMMAND PULSE)
TP6 (COMMAND AGC DC)
TP7
(COMMAND)
TP9
(MPX/RCU)
VR4 (COMMAND LEVEL)
TP10
(GND)
CT2
TP5 (AGC)
TP4 (G/L)
VR3
(G/L BURST LEVEL)
VR2
(G/L SYNC LEVEL)
TP2 (G/L AGC)
CT1 (G/L DOM)
VR1 (G/L LEVEL)
TP1(MPX)
TP3 (G/L AGC DC)

### POWER SEPARATOR
### (COMPONENT SIDE)

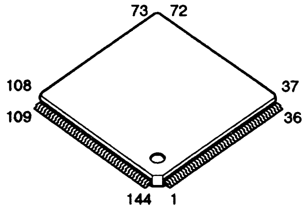

VR1 (89.0V)
TP1 (89.0V)
CN1

### AUDIO BOARD
### (PATTERN SIDE)

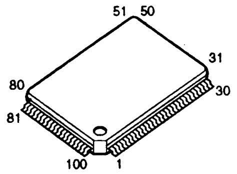

SW1 (AUDIO)
AUDIO
INTERCOM
TP2 (11.2 MHz)
L2 (11.2 MHz)
CN1
VR1
(MPX CARRIER)
TP1 (AUDIO)
ON
SW2 (MPX)
Off
L3 (5.0V)
TP4
TP3 (5.0V)

# APPEARANCE OF IC, TRANSISTOR AND DIODE WV-E550E

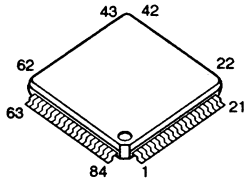
YWVC5776
YWVC5777


73
72
108
109
37
36
144
1

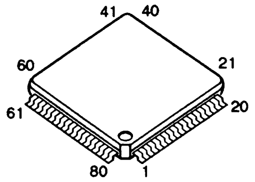
YWL7A0425
YWVC5727
YWVC5778


51
50
31
80
81
30
100
1

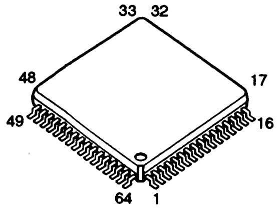
YWMN18885


43
42
62
22
63
21
84
1

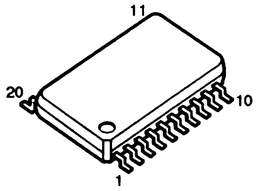
MN73093LBX


41
40
60
21
61
20
80
1

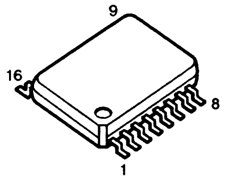
MN5197
YWCXD1267R


33
32
48
17
49
16
64
1

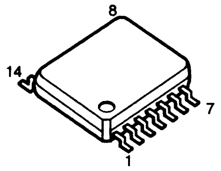
UPD16502GS
MB3782PF
MN6557AS
YWM62352GP



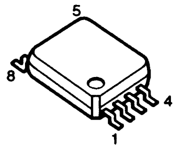
YWTC74HC4050AF
YWUPD74HC4049G
YWUPD74HC4053G
YWUPD4052BG
YWUPD4050BG
YWUPD4053BG
YWUPD4051BG
YWMC74HC4040AF



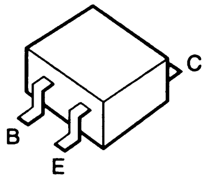
YWTC74AC04
NJM2902V, NJM2902M
YWUPD74HC32G
YWUPD74HC04G
YWUPD74HC08G
YWTC74AC74F
YWTC74AC00F
YWTC74AC08F
UPD74HC164G
YWTC74AC164F
YWUPD4081BG
YWUPD4011BG
RTC450315B
YWUPC4064G2
YWMC74HC10AF
YWMC74HC74AF
YWUPD4066BG



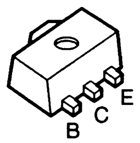
YWUPC4062G2
NJM2903M
YWTC7WU04FU
YWTC7W04FU
YWTC7W74FU
YWLM1881M
NJM2904M
YWTC4W53F
YWM51957BFP
NJM3414M
NJM4556M
YWTC7W04FL



2SC1610
2SA1532
2SA1532-CD
2SB1218
2SB1218-QRS
2SB1219
2SC4176
2SC3930
2SC3931
2SC39331-CD
2SD1819-QRS
2SD1819
2SD1820
2SD1979



2SB956-RS
2SB1073-QR
2SB766A-RS
2SD874A-RS



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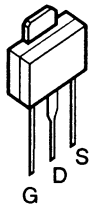

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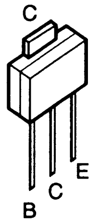
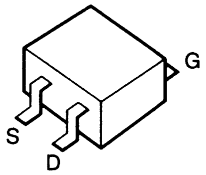
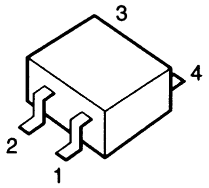
2SC3074



2SK662

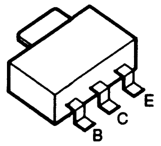


3SK157

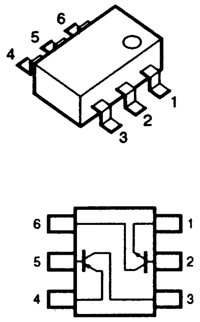


1. Substrate
2. Gate
3. Source
4. Drain

2SB766



XP4601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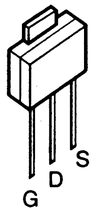
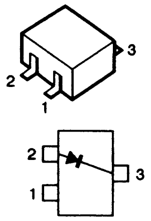
2SJ128



MA141K



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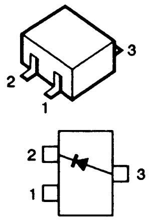

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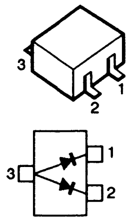
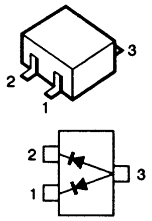
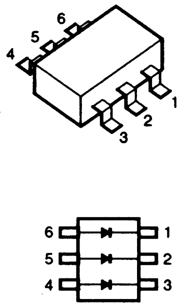


MA141WA



MA121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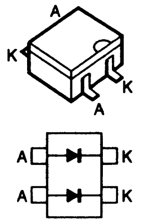
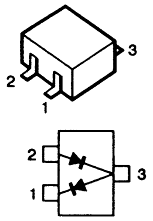
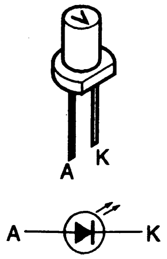
MA159



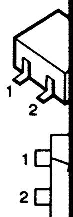
MA143



LN277RPX

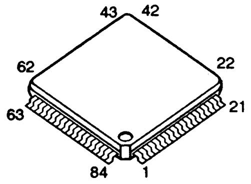


MA3



# APPEARANCE OF IC, TRANSISTOR AND DIODE WV-E550E

YWMN18885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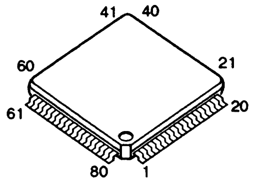
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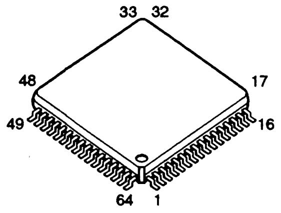
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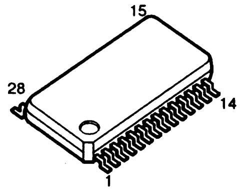

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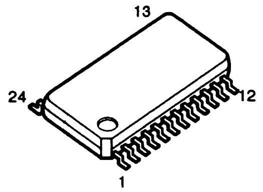

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| YWTC74AC04 | YWTC74AC164F |
| NJM2902V, NJM2902M | YWUPD4081BG |
| YWUPD74HC32G | YWUPD4011BG |
| YWUPD74HC04G | RTC450315B |
| YWUPD74HC08G | YWUPC4064G2 |
| YWTC74AC74F | YWMC74HC10AF |
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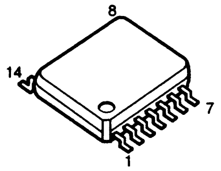
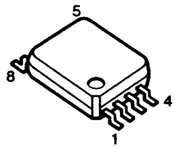
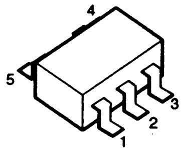


| | |
|---|---|
| YWUPC4062G2 | NJM2904M |
| NJM2903M | YWTC4W53F |
| YWTC7WU04FU | YWM51957BFP |
| YWTC7W04FU | NJM3414M |
| YWTC7W74FU | NJM4556M |
| YWLM1881M | YWTC7W04FL |



| | |
|---|---|
| YWTC7S08F | YWTC7SU04F |
| YWTC7S32FU | YWTC4S11F |
| YWTC7S86FU | YWTC4S584F |
| YWTC7S04F | YWTC4S69F |
| YWTC7S11F | YWTC7S32F |
| YWTC4S66F | YWTC7S08FR |



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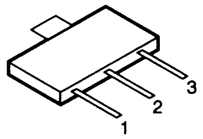

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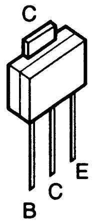

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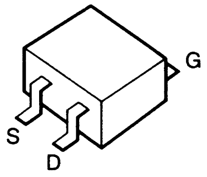
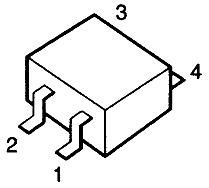
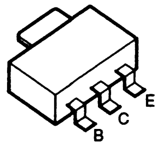


3SK157

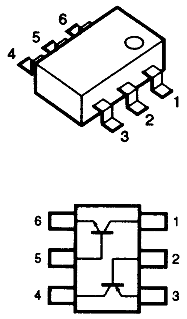


1. Substrate
2. Gate
3. Source
4. Drain

2SB766



IMZ1
UMZ1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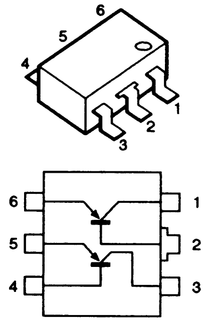
XN6435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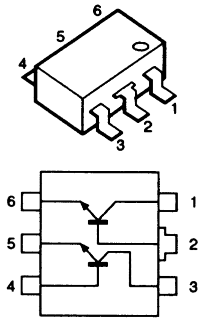
XN6534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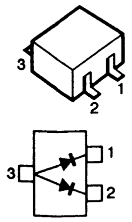
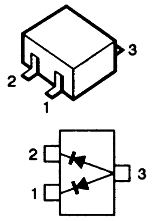
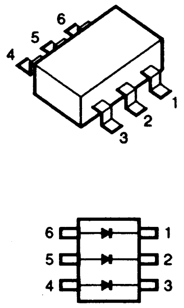
MA141WK



MA141WA



MA121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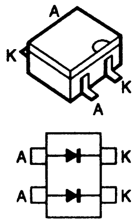
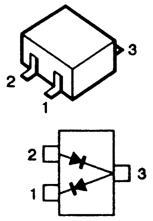
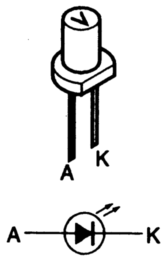
MA159



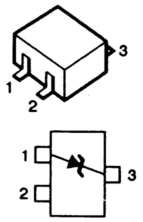
MA143



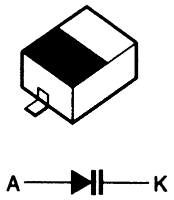
LN277RPX



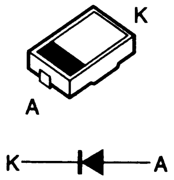
MA3062



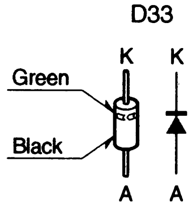
MA372



YWC80204



YWERB83004


D33
Green
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K
K
A
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# APPEARANCE OF IC, TRANSISTOR AND DIODE WV-PS550

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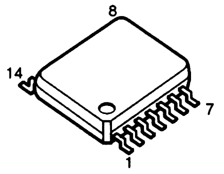
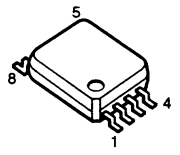
YWUPD4538BG



NJM2903M
NJM4556MB
NJM592M8
NJM4556MB
NJM4560M
TLO62CPS
TL092CPS
TLC272CPS
YWLM1881M
YWUPC4062G2
YWUPC4570G



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UPD74HC4050G
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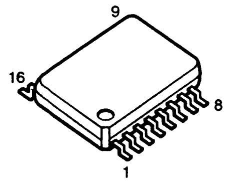
UPD74HC221AG



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YWTC4S69F
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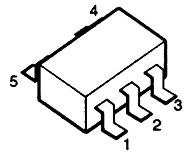
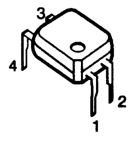


YWSN16913P



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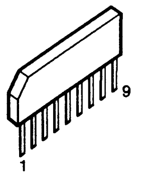

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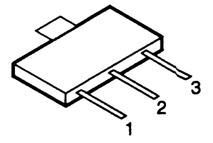

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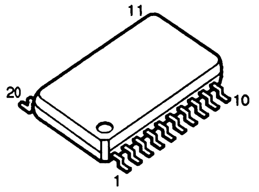
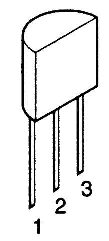
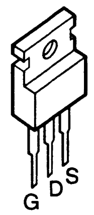


AN1431T



2SJ122



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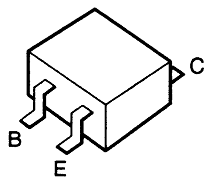
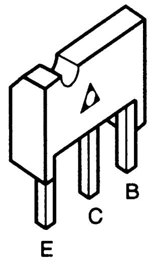
2SB709-RS
2SB1218-QRS
2SB1219-QRS
2SC2404-CD
2SC3938-QRS
2SD601-RS
2SD602-QRS
2SB792A-RS
2SD814-QRS



2SB793-RS



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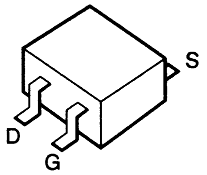
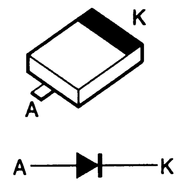


MA338



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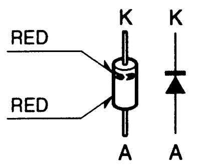
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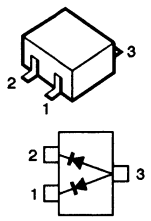
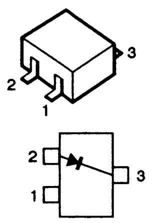
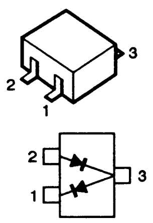
MA151WA



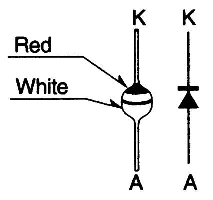
MA151K
MA141K
MA182



MA153
MA157



VO3G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K
Red
White
A
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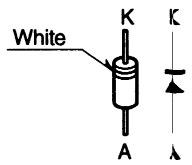
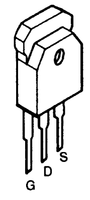
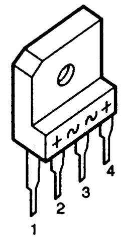
MA165
YWERB38-05



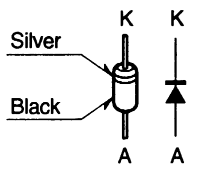
2SK1386



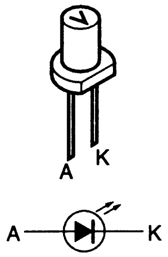
YWD3SBA60



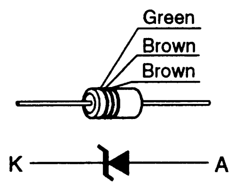
YWERC9102


K
K
Silver
Black
A
A

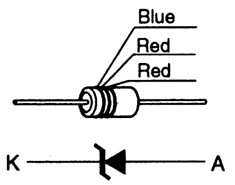
LN277PRX



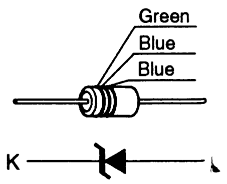
MA1051-M


Green
Brown
Brown
K
A

MA1062-M


Blue
Red
Red
K
A

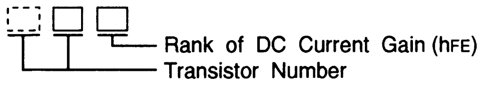
MA1056-H


Green
Blue
Blue
K

# CHIP COMPONENTS

## 1. Chip Transistor

The transistor number is indicated on the top surface of the chip transistor using two alphabet letters or one numerical number and two alphabet letters.



### Transistor Number

(Chip Transistor)

| Letter | Transistor No. | Letter | Transistor No. |
|---|---|---|---|
| A | 2SB709 | X | 2SD602A |
| B | 2SB709A | Y | 2SD601 |
| C | 2SB710 | Z | 2SD601A |
| D | 2SB710A | 1A | 2SB799 |
| E | 2SA1022 | 1B | 2SB814 |
| F | 2SA1034 | 1C | 2SB902 |
| H | 2SA1035 | 1F | 2SK321 |
| I | 2SB792 | 1K | 2SK316 |
| K | 2SC2778 | 1L | 2SK247 |
| P | 2SD814 | 1M | 2SJ84 |
| Q | 2SD813 | 1N | 2SK199 |
| R | 2SC2480 | 1O | 2SK198 |
| S | 2SC2405 | 1T | 2SC3077 |
| T | 2SC2406 | 1X | 2SC2845 |
| U | 2SC2404 | 1Z | 2SD1030 |
| V | 2SC2295 | 2B | 2SK374 |
| W | 2SD602 | 2C | 2SK116 |
| BQ | 2SB766A | UMT | 2SC4081 |

(Small Chip Transistor)

| Letter | Transistor No. |
|---|---|
| A | 2SB1218 |
| B | 2SB1218A |
| D | 2SB1219A |
| U | 2SC3931 |
| W | 2SD1820 |
| X | 2SD1820A |
| Y | 2SD1819 |
| E3 | 2SA1226 |
| OS | 2SB1219 |
| UC | 2SA1532 |
| YU | 2SC3938 |

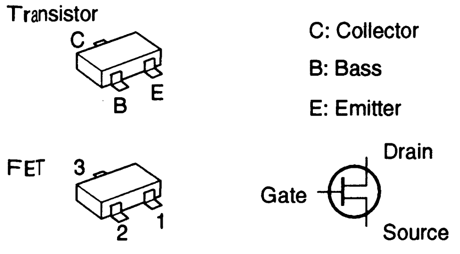
(Pair Transistor)

| Letter | Transistor No. |
|---|---|
| 5C | XN4601 |
| 5N | XN6501 |
| 5O | XN6401 |
| 5H | XP4501 |
| 5L | XN5501 |
| 7F | XN6534 |
| 7S | XP1601 |
| 7W | XN6435 |
| X1 | UMX1 |
| Z1 | UMZ1 |

**Example:**

WQ → 2SD602-Q
YQ → 2SD601-Q
1BS → 2SB814-S

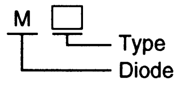
### Appearance and Symbols



| | 1 | 2 | 3 |
|---|---|---|---|
| Eacept 2SK199 | Drain | Source | Gate |
| 2SK199 | Gate | Drain | Source |

## 2. Chip Diode

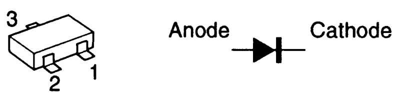
The diode number is indicated on the top surface of the chip diode using two alphabet letters.



### Diode Number

| Letter | Diode No. | Letter | Diode No. |
|---|---|---|---|
| MA | MA151A | MI | MA152K |
| MB | MA152A | MK | MA28W-B |
| MC | MA153 | ML | MA28T-A |
| MD | MA28-A | MN | MA151WA |
| ME | MA28-B | MO | MA152WA |
| MF | MA28W-A | MT | MA151WK |
| MH | MA151K | MU | MA152WK |
| MH | MA141K | 6.2 | MA3062 |
| MC | MA143 | SMD | RD421D |

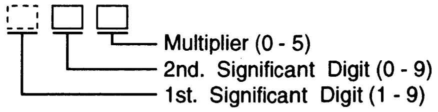
### Appearance and Symbol



| | 1 | 2 | 3 |
|---|---|---|---|
| MA28/MA28W/MA28T | – | Anode | Cathode |
| MA151K/MA152K | – | Anode | Cathode |
| MA151A/MA152A | – | Cathode | Anode |
| MA151WK/MA152WK | Anode | Anode | Cathode |
| MA151WA/MA152WA | Cathode | Cathode | Anode |
| MA153 | Cathode | Anode | Common |
| MA141K | – | Anode | Cathode |
| MA143 | Anode | Cathode | Common |
| MA3062 | Anode | – | Cathode |
| RD421D | Anode | – | Cathode |

## 3. Chip Resistor

The resistor value is indicated on the bottom surface of the chip resistor using three digit numbers.


Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

**Example:**

330 → $33 \times 10^0 = 33\,\Omega$
561 → $56 \times 10^1 = 560\,\Omega$
123 → $12 \times 10^3 = 12\,\mathrm{k}\Omega$

**Note:** Zero ohm resistor (jumper chip) is colored red or green.

## 4. Chip Capacitor

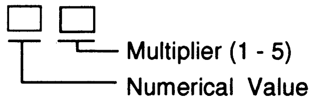
The capacitive value of replacement chip capacitors is indicated on the bottom surface. original parts do not have value indication.

If the capacitive value is less than 100 pF, the value will be indicated by one or two digit number expressing the capacity directly in pF.

**Example:**

0.5 → 0.5 pF 2.5 → 2.5 pF
.75 → 0.75 pF 33 → 33 pF
1 → 1 pF 82 → 82 pF

If the capacitive value is 100 pF or greater, the value will be indicated by an alpha-numeric code. The letter precedes the number and expresses a numerical value to be multiplied by the number which follows.



### Numerical Value

| Letter | Value | Letter | Value |
|---|---|---|---|
| A | 10 | N | 33 |
| B | 11 | P | 36 |
| C | 12 | Q | 39 |
| D | 13 | R | 43 |
| E | 15 | S | 47 |
| F | 16 | T | 51 |
| G | 18 | U | 56 |
| H | 20 | V | 62 |
| J | 22 | W | 68 |
| K | 24 | X | 75 |
| L | 27 | Y | 82 |
| M | 30 | Z | 91 |

* Letters I and O are not used.

Example: A1 → $10 \times 10^1 = 100$ pF
N2 → $33 \times 10^2 = 3300$ pF
S3 → $47 \times 10^3 = 47000$ pF

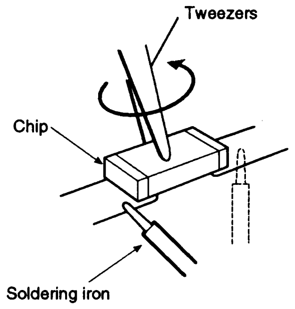
## 5. Precautions in replacing the chip component

1. Make sure that the unit is turned OFF when replacing the chip.
2. Use tweezers to prevent any damage to the chip surface.
3. Do not re-use the chips after removal.
4. Do not rub the electrode of chips.
5. Do not subject the chips to excessive stress.
6. It is recommended that a pencil-type soldering iron to be used.
7. The solder whose diameter is less than 0.5 mm is recommended.
8. Do not heat the chip beyond 3 second.
9. Maintain temperature control under 260°C (500°F) when soldering.

### 5-1 Removal (Transistor, Diode, Resistor and Capacitor)

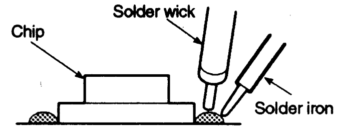
1. Add the solder to both ends of the chip (three leads for chip transistor).
2. While attaching the sokdering iron to both ends of the chip (three leads for chip transistor) as shown below, remove the chip by turning with tweezers.

**Note:** Be careful not to damage other chips.

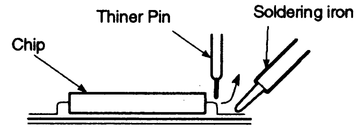


### 5-2 Removal (IC)

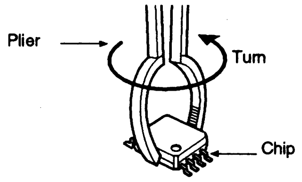
1. Add the solder wick and soldering iron to each lead of the IC and remove solder.



2. Add the soldering iron to each lead of the IC and left each lead of the IC using thiner pin.

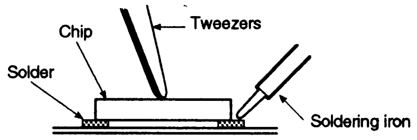


3. Remove IC turning it with plier.

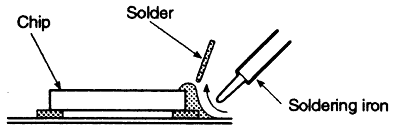


### 5-3 Mounting

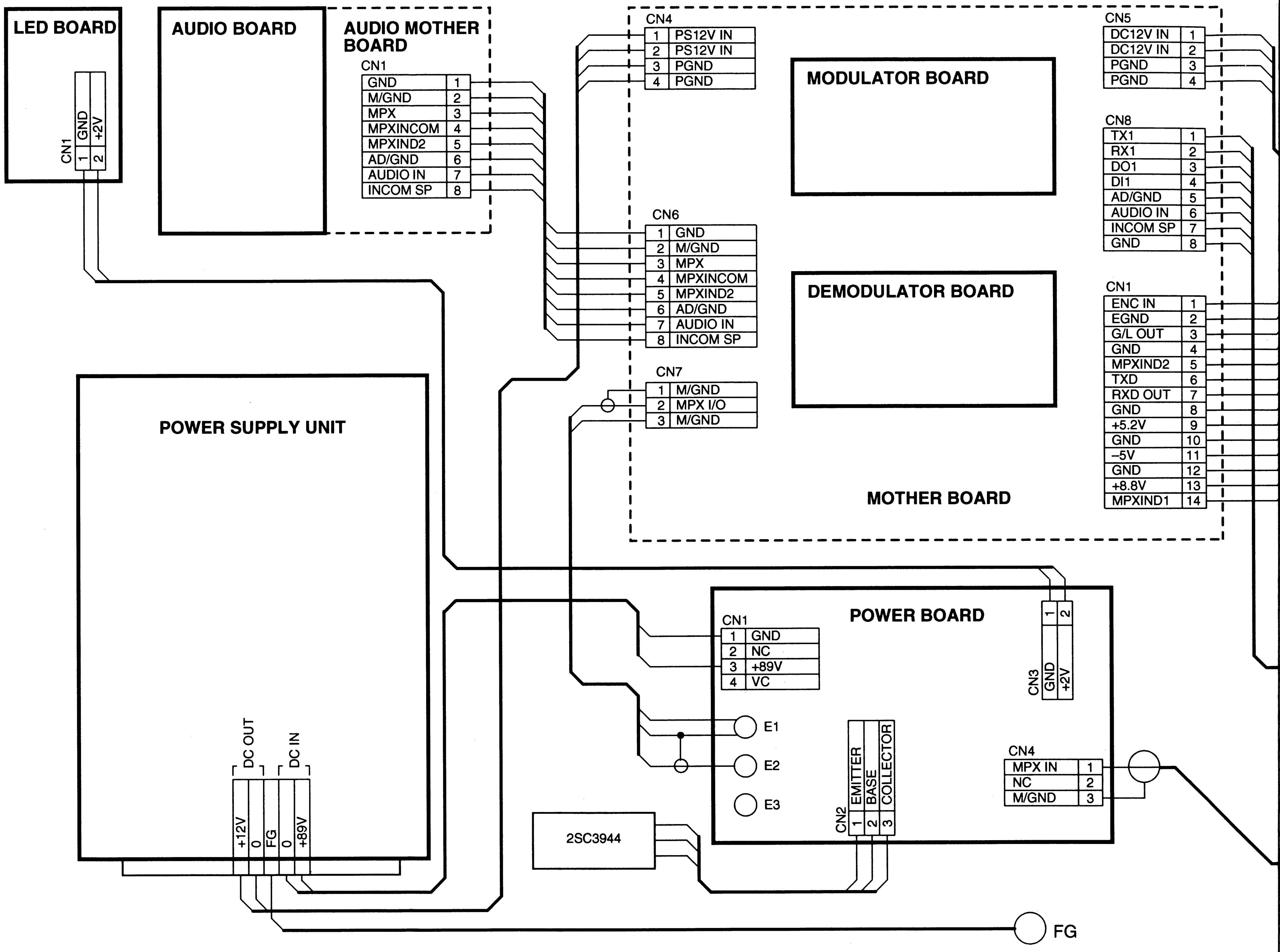
1. Place the solder thinly on the chip mounting foil.
2. Solder the chip temporarily while holding the chip with the tweezers.



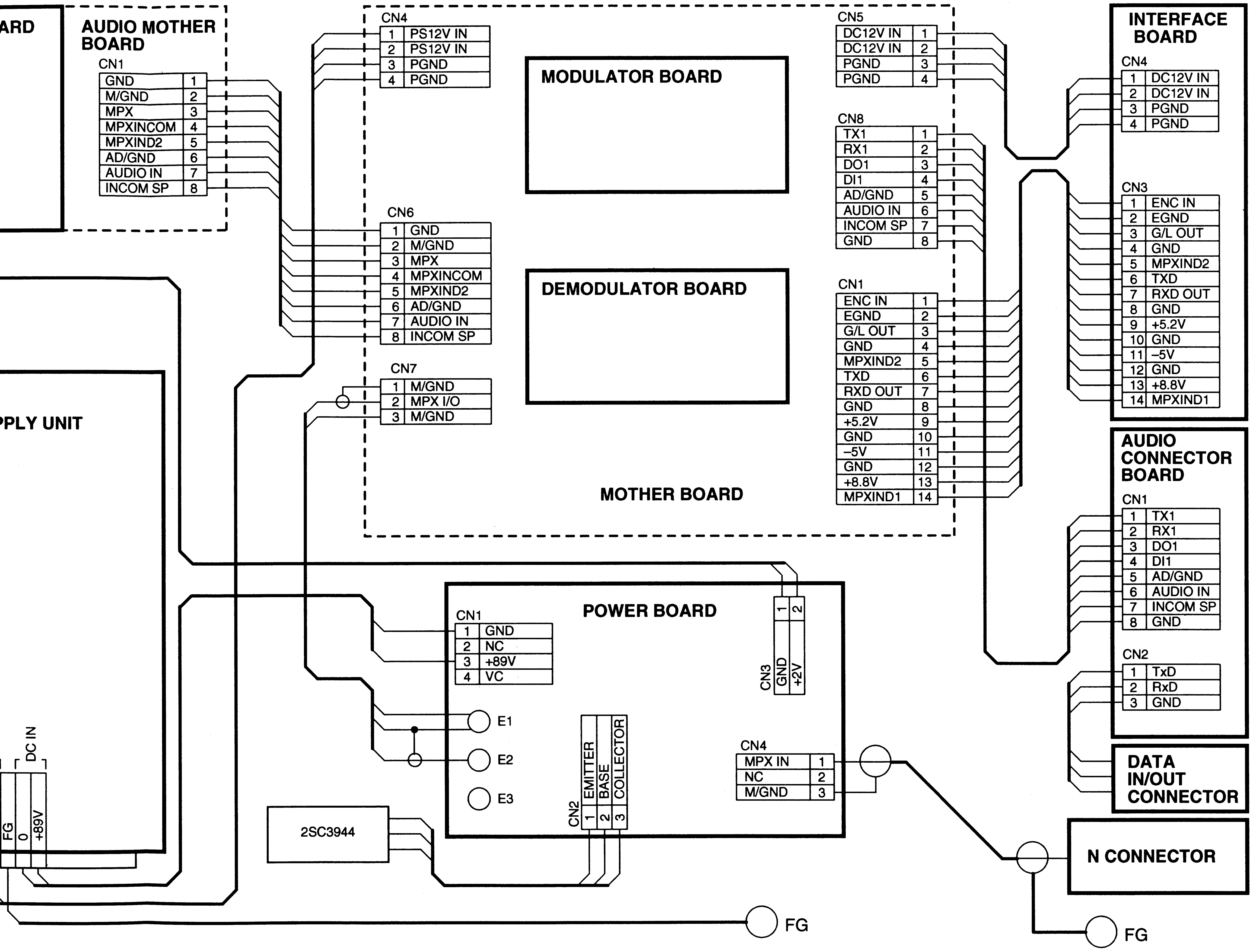
3. Solder both ends of chip (three leads for chip transistor).



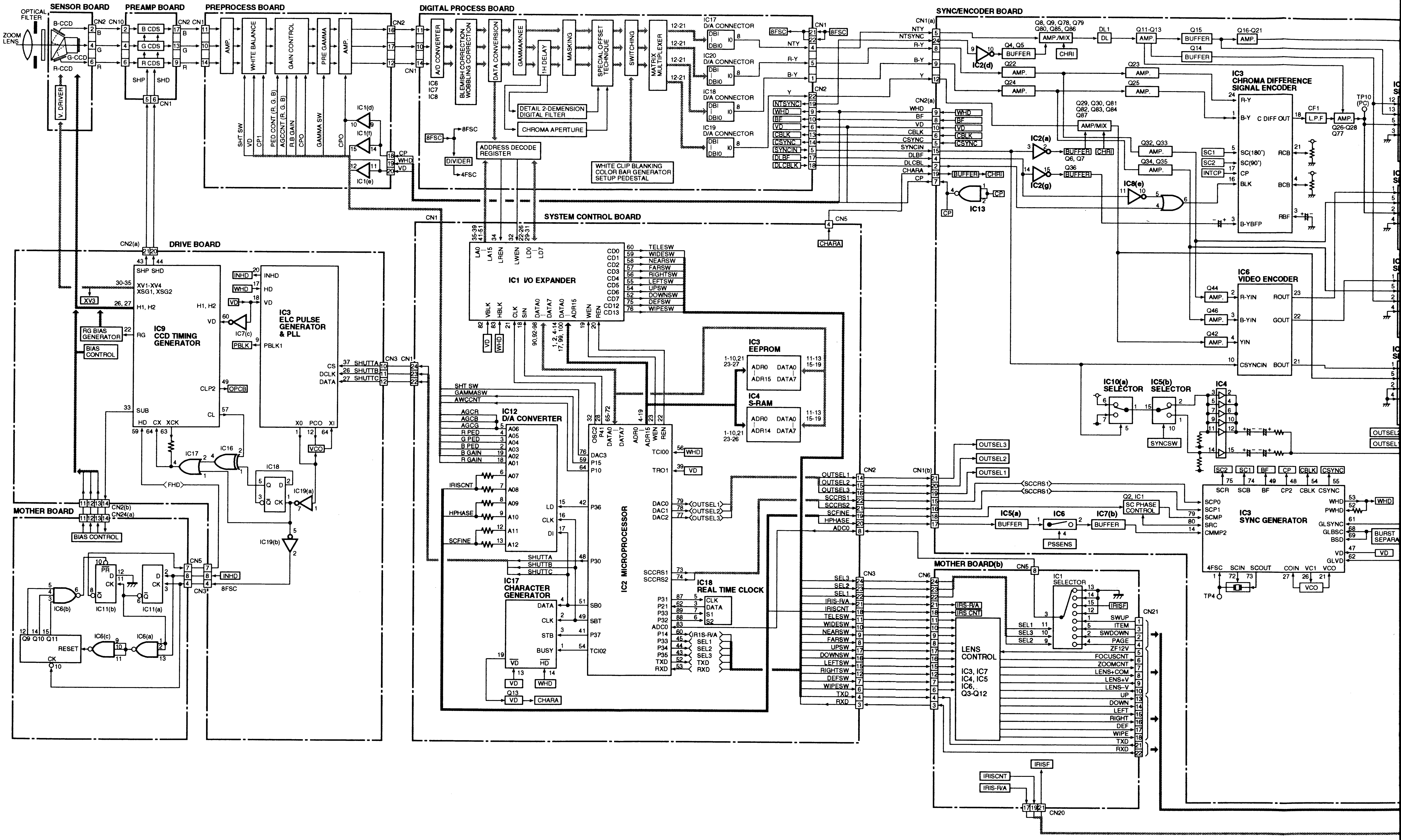
# WIRING DIAGRAM (WV-PS550)


LED BOARD
CN1
1 GND
2 +2V
AUDIO BOARD
AUDIO MOTHER BOARD
CN1
GND 1
M/GND 2
MPX 3
MPXINCOM 4
MPXIND2 5
AD/GND 6
AUDIO IN 7
INCOM SP 8
CN4
1 PS12V IN
2 PS12V IN
3 PGND
4 PGND
MODULATOR BOARD
CN5
DC12V IN 1
DC12V IN 2
PGND 3
PGND 4
CN8
TX1 1
RX1 2
DO1 3
DI1 4
AD/GND 5
AUDIO IN 6
INCOM SP 7
GND 8
CN6
1 GND
2 M/GND
3 MPX
4 MPXINCOM
5 MPXIND2
6 AD/GND
7 AUDIO IN
8 INCOM SP
DEMODULATOR BOARD
CN1
ENC IN 1
EGND 2
G/L OUT 3
GND 4
MPXIND2 5
TXD 6
RXD OUT 7
GND 8
+5.2V 9
GND 10
–5V 11
GND 12
+8.8V 13
MPXIND1 14
CN7
1 M/GND
2 MPX I/O
3 M/GND
MOTHER BOARD
POWER SUPPLY UNIT
DC OUT
DC IN
+12V
0
FG
0
+89V
POWER BOARD
CN1
1 GND
2 NC
3 +89V
4 VC
CN3
1 GND
2 +2V
E1
E2
E3
CN2
1 EMITTER
2 BASE
3 COLLECTOR
CN4
MPX IN 1
NC 2
M/GND 3
2SC3944
FG

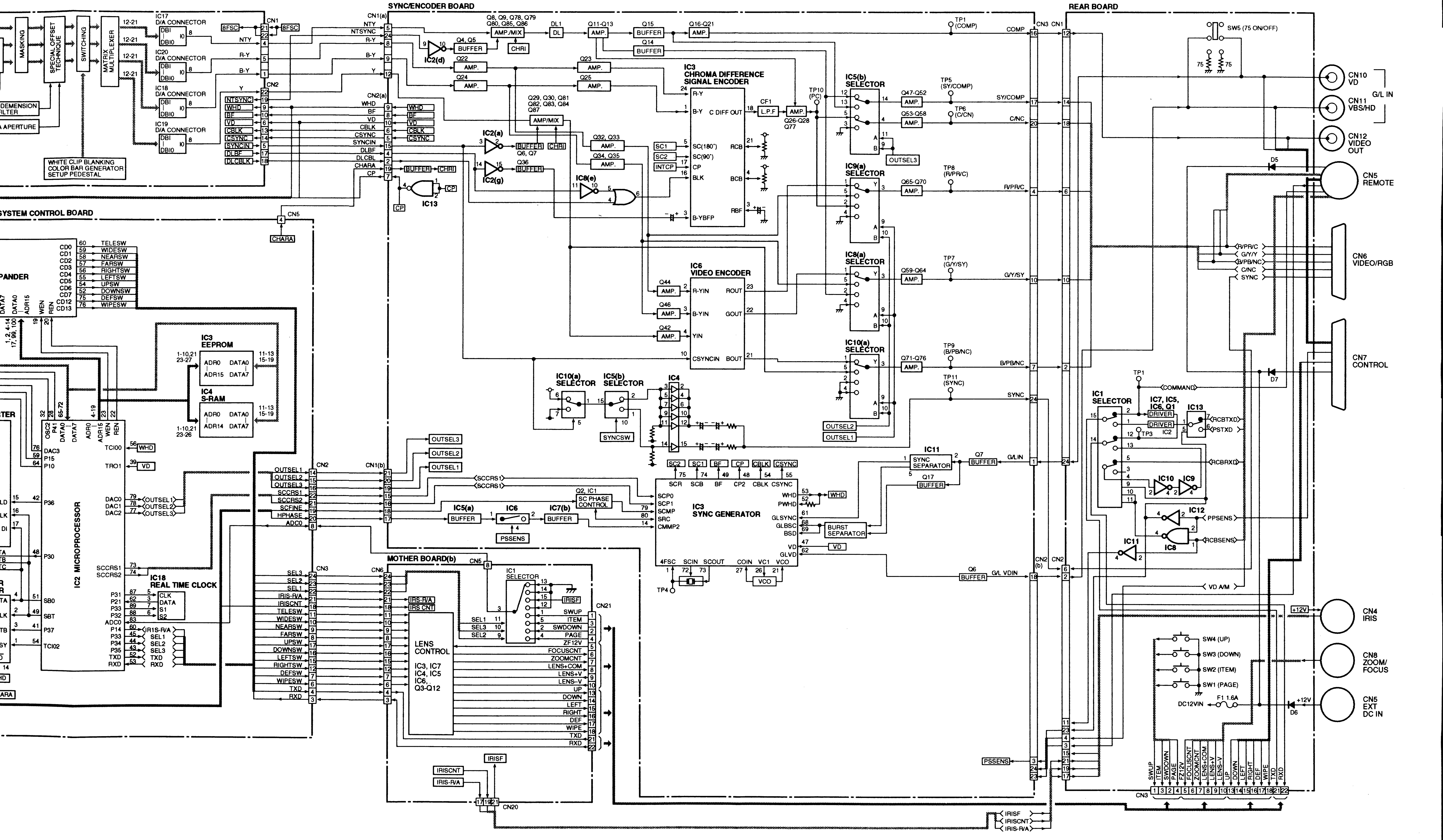
# WIRING DIAGRAM (WV-PS550)


ARD
AUDIO MOTHER BOARD
CN1
GND 1
M/GND 2
MPX 3
MPXINCOM 4
MPXIND2 5
AD/GND 6
AUDIO IN 7
INCOM SP 8
PPLY UNIT
DC IN
FG
0
+89V
CN4
1 PS12V IN
2 PS12V IN
3 PGND
4 PGND
MODULATOR BOARD
DEMODULATOR BOARD
MOTHER BOARD
CN6
1 GND
2 M/GND
3 MPX
4 MPXINCOM
5 MPXIND2
6 AD/GND
7 AUDIO IN
8 INCOM SP
CN7
1 M/GND
2 MPX I/O
3 M/GND
CN5
DC12V IN 1
DC12V IN 2
PGND 3
PGND 4
CN8
TX1 1
RX1 2
DO1 3
DI1 4
AD/GND 5
AUDIO IN 6
INCOM SP 7
GND 8
CN1
ENC IN 1
EGND 2
G/L OUT 3
GND 4
MPXIND2 5
TXD 6
RXD OUT 7
GND 8
+5.2V 9
GND 10
–5V 11
GND 12
+8.8V 13
MPXIND1 14
INTERFACE BOARD
CN4
1 DC12V IN
2 DC12V IN
3 PGND
4 PGND
CN3
1 ENC IN
2 EGND
3 G/L OUT
4 GND
5 MPXIND2
6 TXD
7 RXD OUT
8 GND
9 +5.2V
10 GND
11 –5V
12 GND
13 +8.8V
14 MPXIND1
AUDIO CONNECTOR BOARD
CN1
1 TX1
2 RX1
3 DO1
4 DI1
5 AD/GND
6 AUDIO IN
7 INCOM SP
8 GND
CN2
1 TxD
2 RxD
3 GND
DATA IN/OUT CONNECTOR
POWER BOARD
CN1
1 GND
2 NC
3 +89V
4 VC
CN3
1 GND
2 +2V
E1
E2
E3
CN2
1 EMITTER
2 BASE
3 COLLECTOR
2SC3944
CN4
MPX IN 1
NC 2
M/GND 3
N CONNECTOR
FG
FG

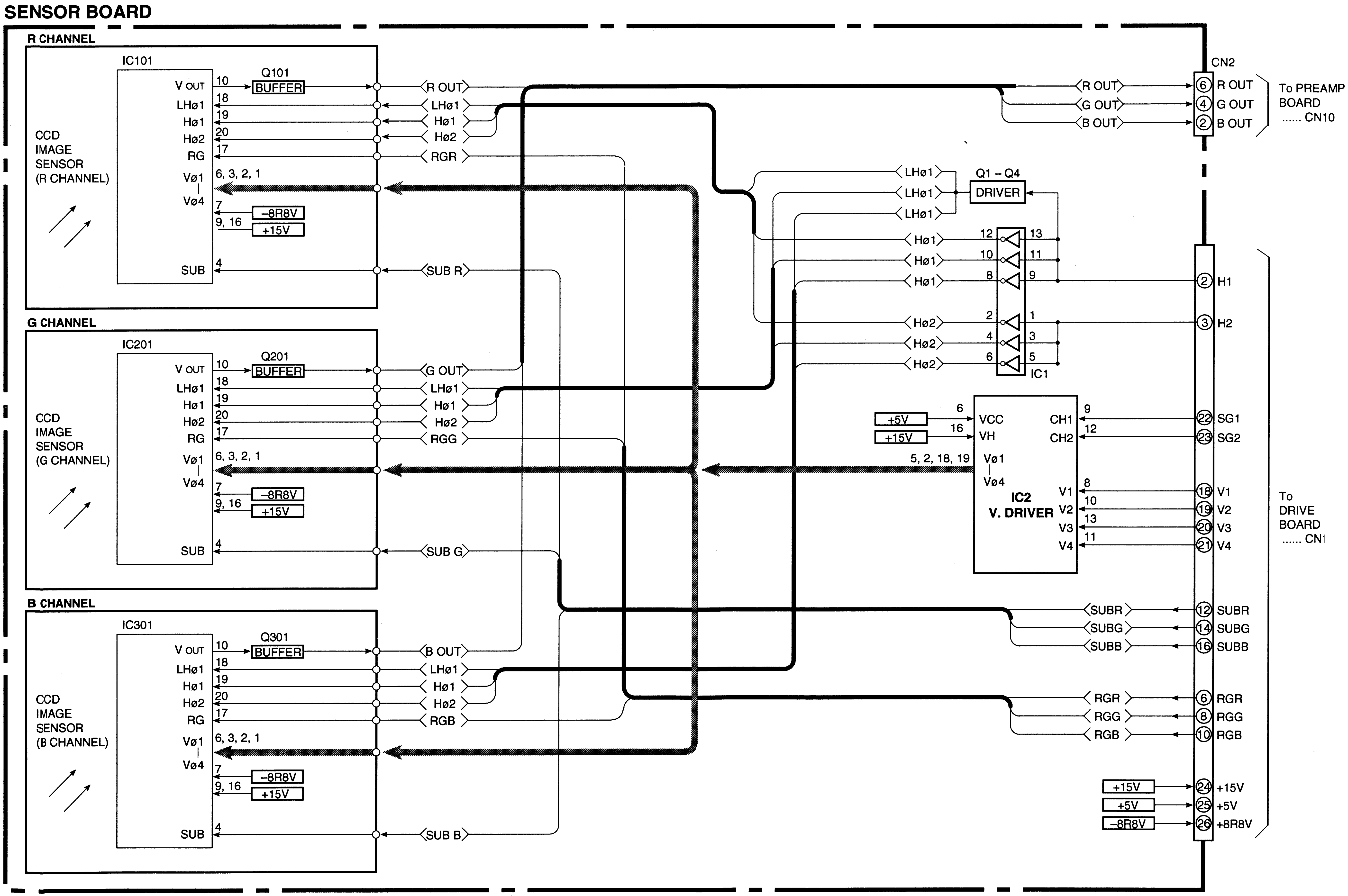
# OVERALL BLOCK DIAGRAM


SENSOR BOARD
OPTICAL FILTER
ZOOM LENS
B-CCD
G-CCD
R-CCD
V. DRIVER
PREAMP BOARD
B CDS
G CDS
R CDS
SHP
SHD
PREPROCESS BOARD
AMP.
WHITE BALANCE
GAIN CONTROL
PRE GAMMA
SHT SW
VD
CP1
PED CONT (R, G, B)
AGCCNT (R, G, B)
R.B GAIN
CPO
GAMMA SW
IC1(d)
IC1(f)
IC1(e)
DIGITAL PROCESS BOARD
A/D CONVERTER
IC6
IC7
IC8
BLEMISH CORRECTION WOBBLING CORRECTION
DATA CONVERSION
GAMMA/KNEE
1H DELAY
MASKING
SPECIAL OFFSET TECHNIQUE
SWITCHING
MATRIX MULTIPLEXER
DETAIL 2-DEMENSION DIGITAL FILTER
CHROMA APERTURE
8FSC
DIVIDER
4FSC
ADDRESS DECODE REGISTER
WHITE CLIP BLANKING
COLOR BAR GENERATOR
SETUP PEDESTAL
IC17 D/A CONNECTOR
IC20 D/A CONNECTOR
IC18 D/A CONNECTOR
IC19 D/A CONNECTOR
NTY
R-Y
B-Y
Y
NTSYNC
WHD
BF
VD
CBLK
CSYNC
SYNCIN
DLBF
DLCBLK
CHARA
CP
SYNC/ENCODER BOARD
Q8, Q9, Q78, Q79
Q80, Q85, Q86
AMP./MIX
DL1
DL
Q11-Q13
Q15
BUFFER
Q14
Q16-Q21
IC2(d)
Q4, Q5
CHRI
Q22
Q23
Q24
Q25
IC3 CHROMA DIFFERENCE SIGNAL ENCODER
C DIFF OUT
CF1
L.P.F
Q26-Q28
Q77
TP10 (PC)
Q29, Q30, Q81
Q82, Q83, Q84
Q87
AMP/MIX
IC2(a)
Q6, Q7
Q32, Q33
Q34, Q35
IC2(g)
Q36
SC1
SC2
INTCP
SC(180°)
SC(90°)
BLK
RCB
BCB
RBF
B-YBFP
IC8(e)
IC13
IC6 VIDEO ENCODER
Q44
Q46
Q42
R-YIN
B-YIN
YIN
CSYNCIN
ROUT
GOUT
BOUT
IC10(a) SELECTOR
IC5(b) SELECTOR
IC4
SYNCSW
OUTSEL2
OUTSEL1
OUTSEL3
SCCRS1
SCCRS2
Q2, IC1
SC PHASE CONTROL
IC5(a)
IC6
IC7(b)
PSSENS
IC3 SYNC GENERATOR
SCP0
SCP1
SCMP
SRC
CMMP2
4FSC
SCIN
SCOUT
COIN
VC1
VCO
TP4
GLSYNC
GLBSC
BSD
GLVD
PWHD
BURST SEPARA
MOTHER BOARD(b)
IC1 SELECTOR
IRISF
SWUP
ITEM
SWDOWN
PAGE
ZF12V
FOCUSCNT
ZOOMCNT
LENS+COM
LENS+V
LENS-V
UP
DOWN
LEFT
RIGHT
DEF
WIPE
TXD
RXD
LENS CONTROL
IC3, IC7
IC4, IC5
IC6,
Q3-Q12
CN21
CN20
IRISCNT
IRIS-R/A
SYSTEM CONTROL BOARD
IC1 I/O EXPANDER
TELESW
WIDESW
NEARSW
FARSW
RIGHTSW
LEFTSW
UPSW
DOWNSW
DEFSW
WIPESW
IC3 EEPROM
IC4 S-RAM
ADR0
ADR15
ADR14
DATA0
DATA7
IC12 D/A CONVERTER
AGCR
AGCB
AGCG
R PED
G PED
B PED
R GAIN
B GAIN
GAMMASW
AWCCNT
HPHASE
SCFINE
IC2 MICROPROCESSOR
IC17 CHARACTER GENERATOR
SHUTTA
SHUTTB
SHUTTC
IC18 REAL TIME CLOCK
Q13
SEL1
SEL2
SEL3
ADCO
DRIVE BOARD
IC9 CCD TIMING GENERATOR
XV1-XV4
XSG1, XSG2
H1, H2
RG BIAS GENERATOR
BIAS CONTROL
XV3
IC3 ELC PULSE GENERATOR & PLL
INHD
PBLK
PBLK1
OPCB
IC7(c)
IC17
IC16
IC18
IC19(a)
IC19(b)
FHD
MOTHER BOARD
IC6(b)
IC11(b)
IC11(a)
IC6(c)
IC6(a)
Q9 Q10 Q11
RESET

# OVERALL BLOCK DIAGRAM

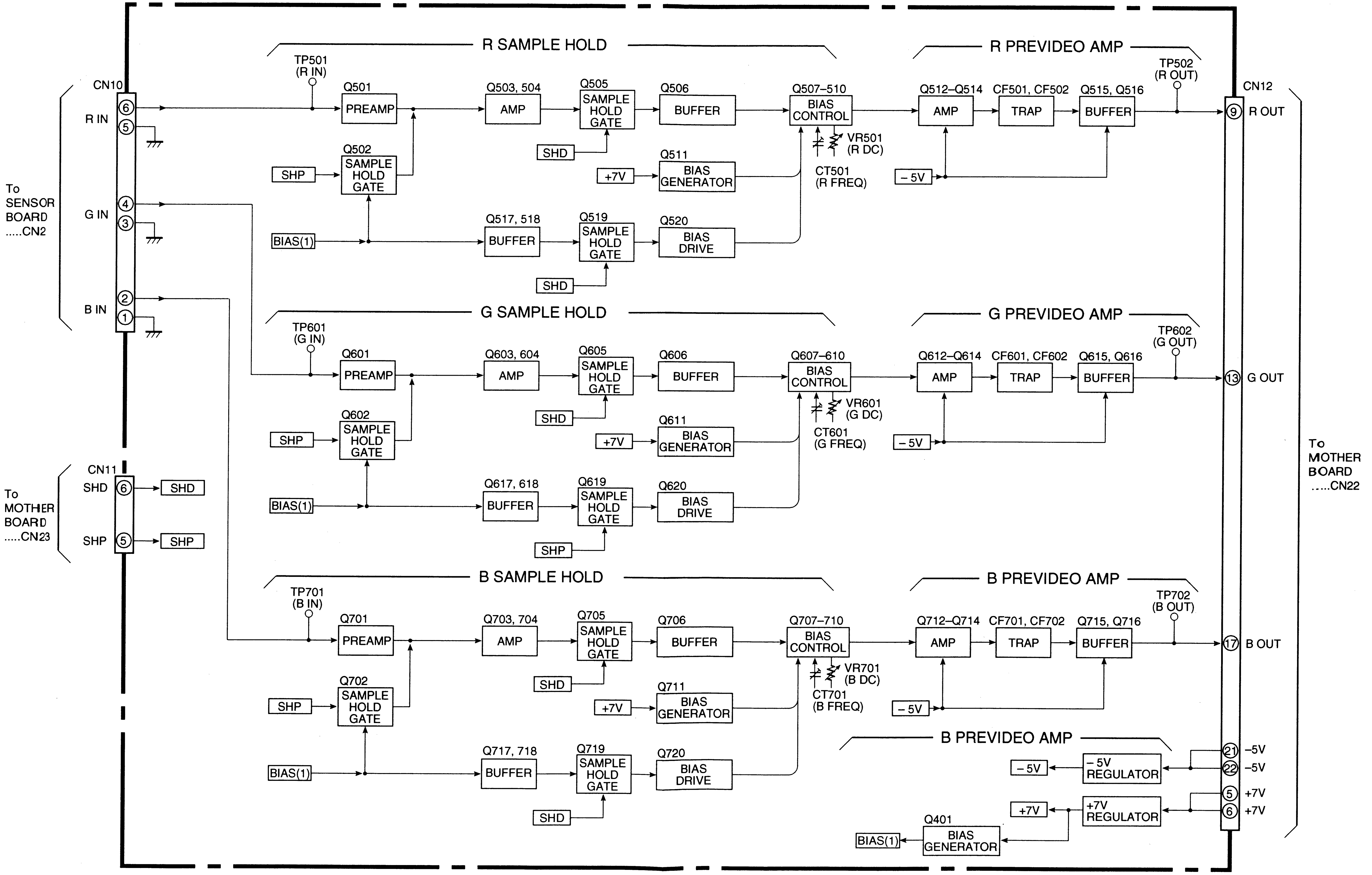

SYNC/ENCODER BOARD
REAR BOARD
SYSTEM CONTROL BOARD
MOTHER BOARD(b)
MASKING
SPECIAL OFFSET TECHNIQUE
SWITCHING
MATRIX MULTIPLEXER
IC17 D/A CONNECTOR
IC20 D/A CONNECTOR
IC18 D/A CONNECTOR
IC19 D/A CONNECTOR
DEMENSION FILTER
APERTURE
WHITE CLIP BLANKING COLOR BAR GENERATOR SETUP PEDESTAL
Q8, Q9, Q78, Q79 Q80, Q85, Q86
AMP./MIX
DL1
Q11-Q13
Q15 BUFFER
Q14 BUFFER
Q16-Q21 AMP.
IC2(d)
Q4, Q5 BUFFER
Q22 AMP.
Q23 AMP.
Q24 AMP.
Q25 AMP.
IC3 CHROMA DIFFERENCE SIGNAL ENCODER
CF1 L.P.F
Q26-Q28 Q77
IC5(b) SELECTOR
Q47-Q52 AMP.
Q53-Q58 AMP.
TP1 (COMP)
TP5 (SY/COMP)
TP6 (C/CN)
TP10 (PC)
IC2(a)
IC2(g)
Q6, Q7 BUFFER
Q36 BUFFER
Q29, Q30, Q81 Q82, Q83, Q84 Q87 AMP./MIX
Q32, Q33 AMP.
Q34, Q35 AMP.
IC8(e)
IC13
IC9(a) SELECTOR
Q65-Q70 AMP.
TP8 (R/PR/C)
IC6 VIDEO ENCODER
IC8(a) SELECTOR
Q59-Q64 AMP.
TP7 (G/Y/SY)
Q44 AMP.
Q46 AMP.
Q42 AMP.
IC10(a) SELECTOR
Q71-Q76 AMP.
TP9 (B/PB/NC)
TP11 (SYNC)
IC10(a) SELECTOR
IC5(b) SELECTOR
IC4
SYNCSW
OUTSEL1
OUTSEL2
OUTSEL3
IC11 SYNC SEPARATOR
Q7 BUFFER
Q17 BUFFER
Q2, IC1 SC PHASE CONTROL
IC5(a) BUFFER
IC6
IC7(b) BUFFER
PSSENS
IC3 SYNC GENERATOR
BURST SEPARATOR
Q6 BUFFER
VCO
TP4
IC1 SELECTOR
LENS CONTROL
IC3, IC7 IC4, IC5 IC6, Q3-Q12
IRISF
IRISCNT
IRIS-R/A
CN20
CN21
IC2 MICROPROCESSOR
IC3 EEPROM
IC4 S-RAM
IC18 REAL TIME CLOCK
PANDER
SW5 (75 ON/OFF)
CN10 VD
CN11 VBS/HD
G/L IN
CN12 VIDEO OUT
CN5 REMOTE
CN6 VIDEO/RGB
CN7 CONTROL
D5
D7
TP1
COMMAND
IC1 SELECTOR
IC7, IC5, IC6, Q1 DRIVER
IC13
RCBTXD
PSTXD
TP3
IC2
RCBRXD
IC10
IC9
IC12
PPSENS
IC8
RCBSENS
IC11
VD A/M
+12V
CN4 IRIS
SW4 (UP)
SW3 (DOWN)
SW2 (ITEM)
SW1 (PAGE)
CN8 ZOOM/ FOCUS
DC12VIN
F1 1.6A
D6
CN5 EXT DC IN
SWUP
ITEM
SWDOWN
PAGE
FZ12V
FOCUSCNT
ZOOMCNT
LENS+COM
LENS+V
LENS-V
UP
DOWN
LEFT
RIGHT
DEF
WIPE
TXD
RXD
CN3
COMP
SY/COMP
C/NC
R/PR/C
G/Y/SY
B/PB/NC
SYNC
G/L IN
G/L VDIN

# BLOCK DIAGRAM OF SENSOR BOARD

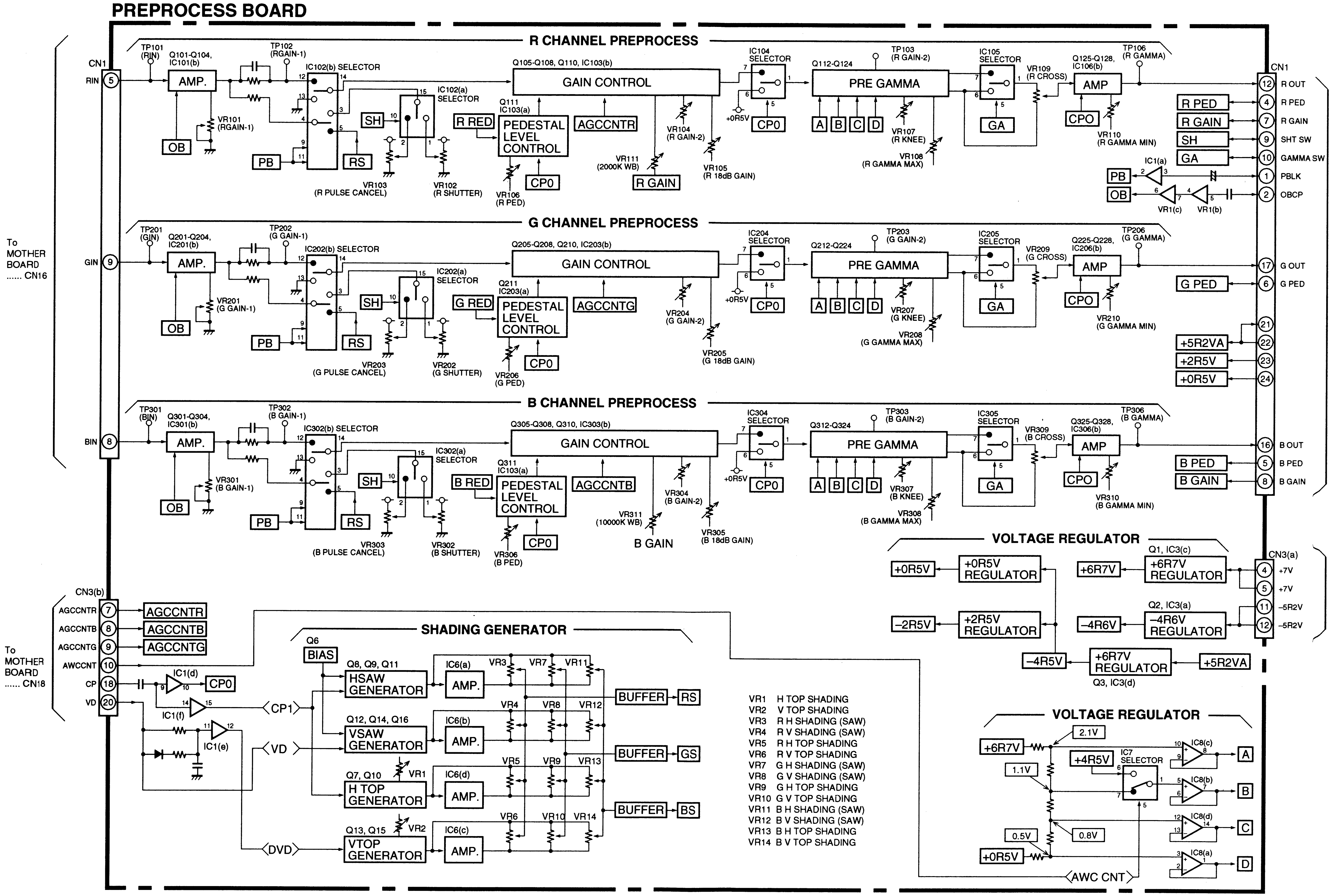

SENSOR BOARD
R CHANNEL
IC101
CCD IMAGE SENSOR (R CHANNEL)
V OUT
LHø1
Hø1
Hø2
RG
Vø1 | Vø4
SUB
10
18
19
20
17
6, 3, 2, 1
7
9, 16
4
Q101
BUFFER
-8R8V
+15V
R OUT
LHø1
Hø1
Hø2
RGR
SUB R
G CHANNEL
IC201
CCD IMAGE SENSOR (G CHANNEL)
Q201
BUFFER
G OUT
RGG
SUB G
B CHANNEL
IC301
CCD IMAGE SENSOR (B CHANNEL)
Q301
BUFFER
B OUT
RGB
SUB B
Q1 – Q4
DRIVER
IC1
12
13
10
11
8
9
2
1
4
3
6
5
IC2
V. DRIVER
VCC
VH
Vø1 | Vø4
CH1
CH2
V1
V2
V3
V4
+5V
+15V
6
16
5, 2, 18, 19
9
12
8
10
13
11
CN2
⑥ R OUT
④ G OUT
② B OUT
To PREAMP BOARD ...... CN10
② H1
③ H2
㉒ SG1
㉓ SG2
⑱ V1
⑲ V2
⑳ V3
㉑ V4
⑫ SUBR
⑭ SUBG
⑯ SUBB
⑥ RGR
⑧ RGG
⑩ RGB
㉔ +15V
㉕ +5V
㉖ +8R8V
SUBR
SUBG
SUBB
RGR
RGG
RGB
+15V
+5V
-8R8V
To DRIVE BOARD ...... CN1

# BLOCK DIAGRAM OF PREAMP/ENCODER BOARD (PREAMP SECTION)

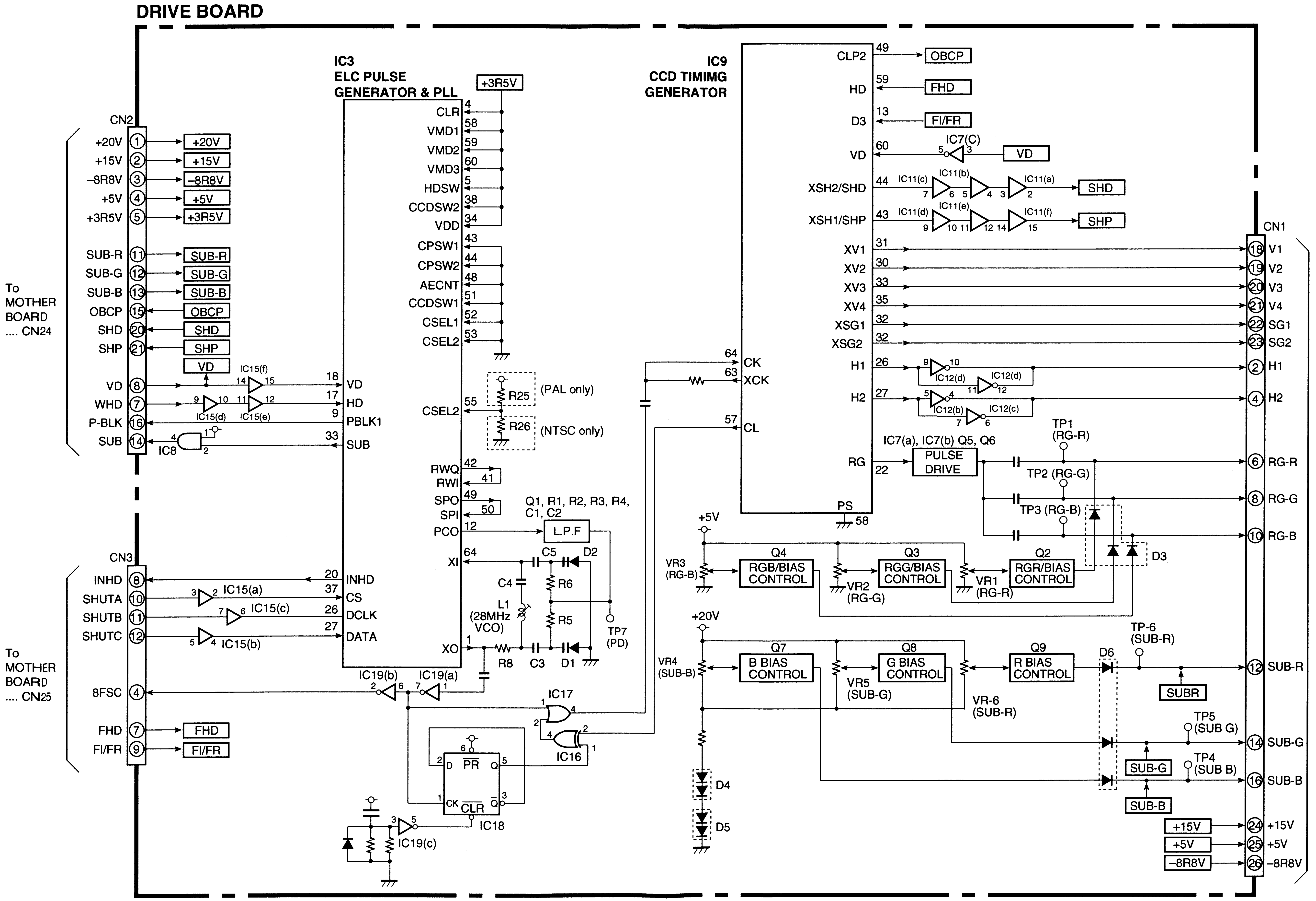
## PREAMP SECTION


R SAMPLE HOLD
R PREVIDEO AMP
G SAMPLE HOLD
G PREVIDEO AMP
B SAMPLE HOLD
B PREVIDEO AMP
To SENSOR BOARD .....CN2
CN10
R IN
G IN
B IN
TP501 (R IN)
Q501 PREAMP
Q502 SAMPLE HOLD GATE
SHP
BIAS(1)
Q503, 504 AMP
Q505 SAMPLE HOLD GATE
SHD
Q506 BUFFER
Q507–510 BIAS CONTROL
VR501 (R DC)
CT501 (R FREQ)
Q511 BIAS GENERATOR
+7V
Q517, 518 BUFFER
Q519 SAMPLE HOLD GATE
Q520 BIAS DRIVE
Q512–Q514 AMP
CF501, CF502 TRAP
Q515, Q516 BUFFER
TP502 (R OUT)
– 5V
CN12
R OUT
TP601 (G IN)
Q601 PREAMP
Q602 SAMPLE HOLD GATE
Q603, 604 AMP
Q605 SAMPLE HOLD GATE
Q606 BUFFER
Q607–610 BIAS CONTROL
VR601 (G DC)
CT601 (G FREQ)
Q611 BIAS GENERATOR
Q617, 618 BUFFER
Q619 SAMPLE HOLD GATE
Q620 BIAS DRIVE
Q612–Q614 AMP
CF601, CF602 TRAP
Q615, Q616 BUFFER
TP602 (G OUT)
G OUT
CN11
SHD
SHP
To MOTHER BOARD .....CN23
TP701 (B IN)
Q701 PREAMP
Q702 SAMPLE HOLD GATE
Q703, 704 AMP
Q705 SAMPLE HOLD GATE
Q706 BUFFER
Q707–710 BIAS CONTROL
VR701 (B DC)
CT701 (B FREQ)
Q711 BIAS GENERATOR
Q717, 718 BUFFER
Q719 SAMPLE HOLD GATE
Q720 BIAS DRIVE
Q712–Q714 AMP
CF701, CF702 TRAP
Q715, Q716 BUFFER
TP702 (B OUT)
B OUT
– 5V REGULATOR
+7V REGULATOR
Q401 BIAS GENERATOR
–5V
+7V
To MOTHER BOARD .....CN22

# BLOCK DIAGRAM OF PREPROCESS BOARD

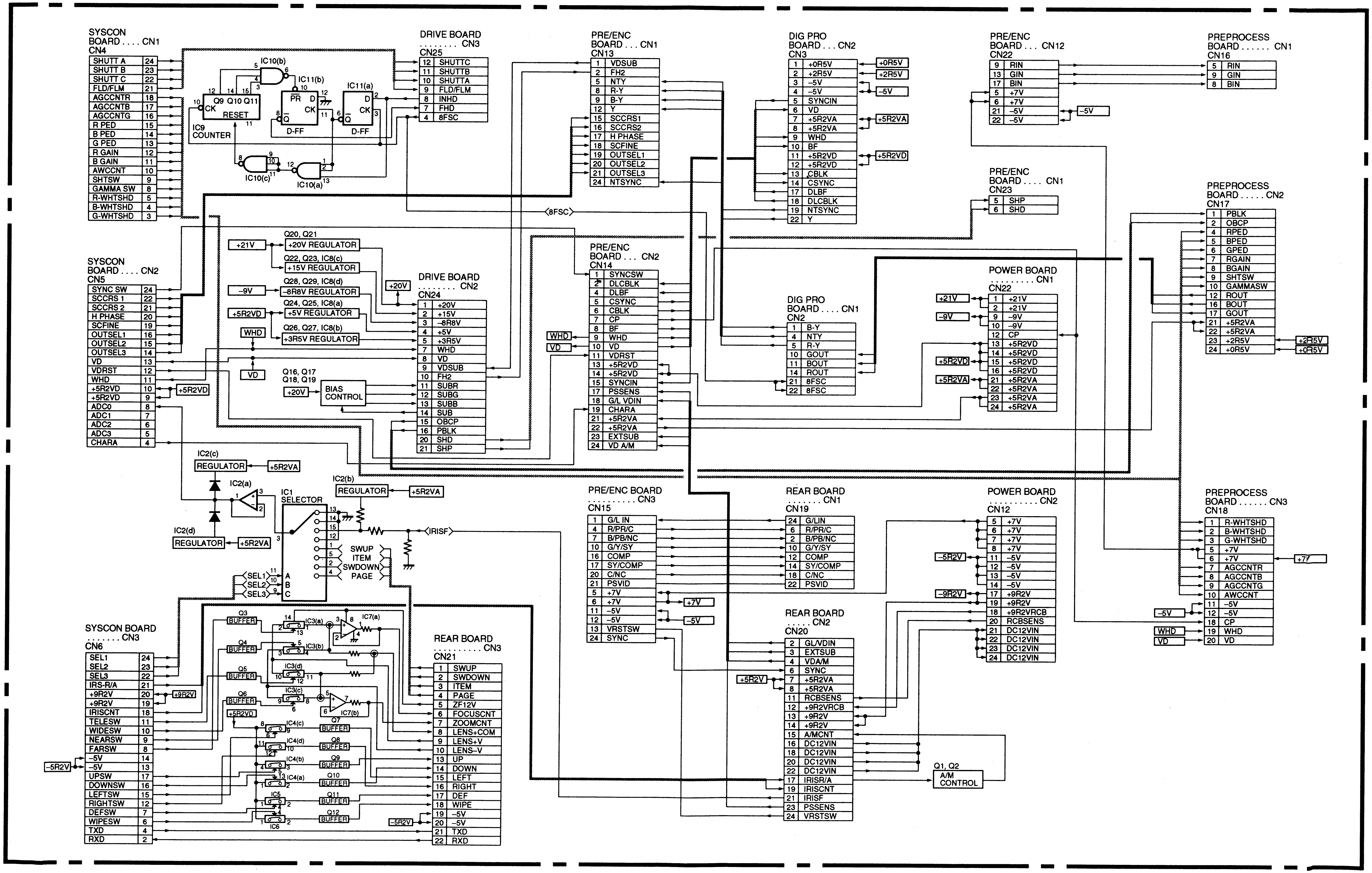

PREPROCESS BOARD
R CHANNEL PREPROCESS
G CHANNEL PREPROCESS
B CHANNEL PREPROCESS
CN1
RIN
GIN
BIN
TP101 (RIN)
Q101-Q104, IC101(b)
AMP.
TP102 (RGAIN-1)
IC102(b) SELECTOR
IC102(a) SELECTOR
VR101 (RGAIN-1)
OB
PB
RS
SH
R RED
VR103 (R PULSE CANCEL)
VR102 (R SHUTTER)
Q105-Q108, Q110, IC103(b)
GAIN CONTROL
Q111 IC103(a)
PEDESTAL LEVEL CONTROL
AGCCNTR
VR106 (R PED)
CP0
VR111 (2000K WB)
R GAIN
VR104 (R GAIN-2)
VR105 (R 18dB GAIN)
IC104 SELECTOR
+0R5V
Q112-Q124
TP103 (R GAIN-2)
PRE GAMMA
A
B
C
D
VR107 (R KNEE)
VR108 (R GAMMA MAX)
IC105 SELECTOR
GA
VR109 (R CROSS)
Q125-Q128, IC106(b)
AMP
TP106 (R GAMMA)
VR110 (R GAMMA MIN)
TP201 (GIN)
Q201-Q204, IC201(b)
TP202 (G GAIN-1)
IC202(b) SELECTOR
IC202(a) SELECTOR
VR201 (G GAIN-1)
G RED
VR203 (G PULSE CANCEL)
VR202 (G SHUTTER)
Q205-Q208, Q210, IC203(b)
Q211 IC203(a)
AGCCNTG
VR206 (G PED)
VR204 (G GAIN-2)
VR205 (G 18dB GAIN)
IC204 SELECTOR
Q212-Q224
TP203 (G GAIN-2)
VR207 (G KNEE)
VR208 (G GAMMA MAX)
IC205 SELECTOR
VR209 (G CROSS)
Q225-Q228, IC206(b)
TP206 (G GAMMA)
VR210 (G GAMMA MIN)
TP301 (BIN)
Q301-Q304, IC301(b)
TP302 (B GAIN-1)
IC302(b) SELECTOR
IC302(a) SELECTOR
VR301 (B GAIN-1)
B RED
VR303 (B PULSE CANCEL)
VR302 (B SHUTTER)
Q305-Q308, Q310, IC303(b)
Q311 IC103(a)
AGCCNTB
VR306 (B PED)
VR311 (10000K WB)
B GAIN
VR304 (B GAIN-2)
VR305 (B 18dB GAIN)
IC304 SELECTOR
Q312-Q324
TP303 (B GAIN-2)
VR307 (B KNEE)
VR308 (B GAMMA MAX)
IC305 SELECTOR
VR309 (B CROSS)
Q325-Q328, IC306(b)
TP306 (B GAMMA)
VR310 (B GAMMA MIN)
R OUT
R PED
R GAIN
SHT SW
GAMMA SW
PBLK
OBCP
IC1(a)
VR1(c)
VR1(b)
G OUT
G PED
+5R2VA
+2R5V
+0R5V
B OUT
B PED
B GAIN
To MOTHER BOARD ...... CN16
To MOTHER BOARD ...... CN17
To MOTHER BOARD ...... CN18
VOLTAGE REGULATOR
Q1, IC3(c)
+0R5V REGULATOR
+6R7V
+6R7V REGULATOR
CN3(a)
+7V
-5R2V
Q2, IC3(a)
-2R5V
+2R5V REGULATOR
-4R6V
-4R6V REGULATOR
-4R5V
+6R7V REGULATOR
+5R2VA
Q3, IC3(d)
CN3(b)
AGCCNTR
AGCCNTB
AGCCNTG
AWCCNT
CP
VD
IC1(d)
IC1(f)
IC1(e)
CP1
DVD
SHADING GENERATOR
Q6
BIAS
Q8, Q9, Q11
HSAW GENERATOR
Q12, Q14, Q16
VSAW GENERATOR
Q7, Q10
H TOP GENERATOR
VR1
Q13, Q15
VTOP GENERATOR
VR2
IC6(a)
IC6(b)
IC6(d)
IC6(c)
VR3
VR7
VR11
VR4
VR8
VR12
VR5
VR9
VR13
VR6
VR10
VR14
BUFFER
GS
BS
VR1 H TOP SHADING
VR2 V TOP SHADING
VR3 R H SHADING (SAW)
VR4 R V SHADING (SAW)
VR5 R H TOP SHADING
VR6 R V TOP SHADING
VR7 G H SHADING (SAW)
VR8 G V SHADING (SAW)
VR9 G H TOP SHADING
VR10 G V TOP SHADING
VR11 B H SHADING (SAW)
VR12 B V SHADING (SAW)
VR13 B H TOP SHADING
VR14 B V TOP SHADING
2.1V
+4R5V
IC7 SELECTOR
1.1V
0.5V
0.8V
IC8(c)
IC8(b)
IC8(d)
IC8(a)
AWC CNT

# BLOCK DIAGRAM OF DRIVE BOARD


DRIVE BOARD
CN2
+20V
+15V
–8R8V
+5V
+3R5V
SUB-R
SUB-G
SUB-B
OBCP
SHD
SHP
VD
WHD
P-BLK
SUB
To MOTHER BOARD .... CN24
IC15(f)
IC15(d)
IC15(e)
IC8
IC3
ELC PULSE GENERATOR & PLL
CLR
VMD1
VMD2
VMD3
HDSW
CCDSW2
VDD
CPSW1
CPSW2
AECNT
CCDSW1
CSEL1
CSEL2
HD
PBLK1
RWQ
RWI
SPO
SPI
PCO
XI
XO
INHD
CS
DCLK
DATA
R25
(PAL only)
R26
(NTSC only)
Q1, R1, R2, R3, R4, C1, C2
L.P.F
C5
D2
C4
R6
L1 (28MHz VCO)
R5
TP7 (PD)
R8
C3
D1
CN3
INHD
SHUTA
SHUTB
SHUTC
IC15(a)
IC15(c)
IC15(b)
8FSC
FHD
FI/FR
To MOTHER BOARD .... CN25
IC19(b)
IC19(a)
IC17
IC16
IC18
D PR Q CK CLR Q
IC19(c)
IC9
CCD TIMIMG GENERATOR
CLP2
D3
XSH2/SHD
XSH1/SHP
XV1
XV2
XV3
XV4
XSG1
XSG2
H1
H2
CK
XCK
CL
RG
PS
IC7(C)
IC11(c)
IC11(b)
IC11(a)
IC11(d)
IC11(e)
IC11(f)
IC12(d)
IC12(b)
IC12(c)
IC7(a), IC7(b) Q5, Q6
PULSE DRIVE
TP1 (RG-R)
TP2 (RG-G)
TP3 (RG-B)
D3
+5V
VR3 (RG-B)
Q4 RGB/BIAS CONTROL
VR2 (RG-G)
Q3 RGG/BIAS CONTROL
VR1 (RG-R)
Q2 RGR/BIAS CONTROL
+20V
VR4 (SUB-B)
Q7 B BIAS CONTROL
VR5 (SUB-G)
Q8 G BIAS CONTROL
VR-6 (SUB-R)
Q9 R BIAS CONTROL
D6
TP-6 (SUB-R)
SUBR
TP5 (SUB G)
TP4 (SUB B)
SUB-G
SUB-B
D4
D5
CN1
V1
V2
V3
V4
SG1
SG2
RG-R
RG-G
RG-B
SUB-R
SUB-G
SUB-B
+15V
+5V
–8R8V
To SENSOR BOARD ...... CN1

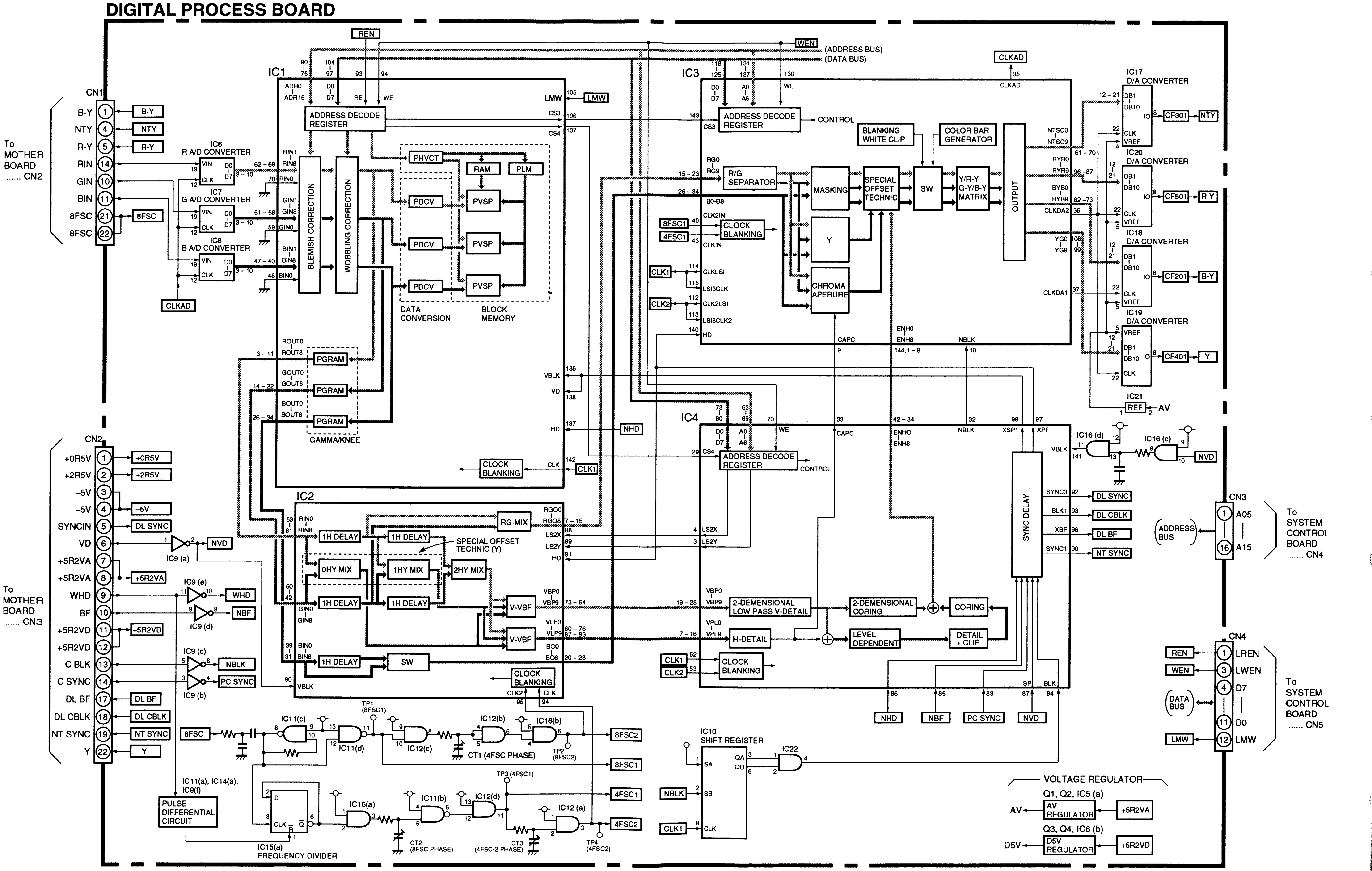
# BLOCK DIAGRAM OF MOTHER BOARD

## MOTHER BOARD

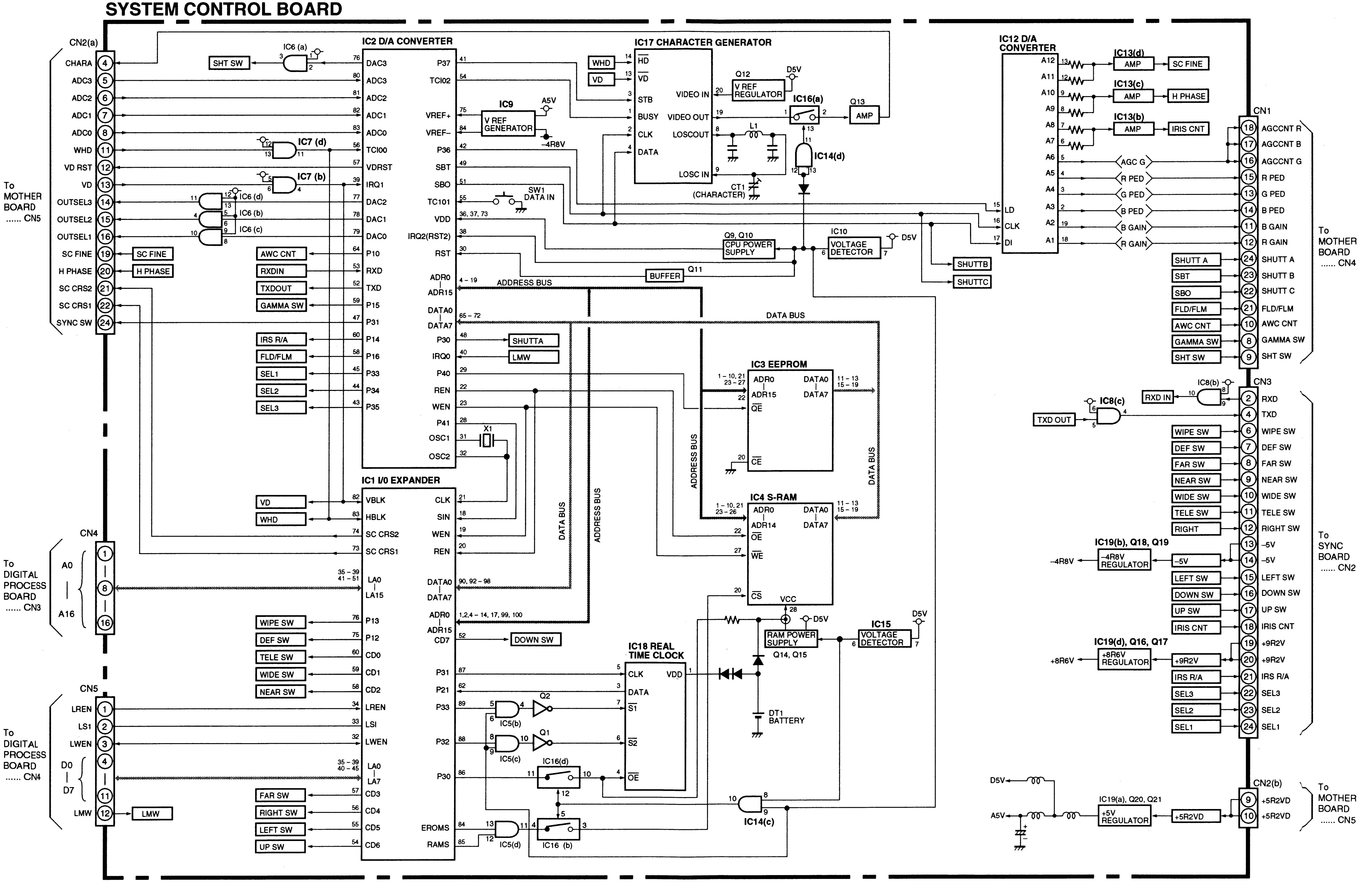


SYSCON BOARD .... CN1
CN4
SHUTT A 24
SHUTT B 23
SHUTT C 22
FLD/FLM 21
AGCCNTR 18
AGCCNTB 17
AGCCNTG 16
R PED 15
B PED 14
G PED 13
R GAIN 12
B GAIN 11
AWCCNT 10
SHTSW 9
GAMMA SW 8
R-WHTSHD 5
B-WHTSHD 4
G-WHTSHD 3
IC10(b)
IC11(b)
IC11(a)
Q9 Q10 Q11
CK
RESET
IC9
COUNTER
PR D
CK
Q
D-FF
IC10(c)
IC10(a)
DRIVE BOARD ........ CN3
CN25
12 SHUTTC
11 SHUTTB
10 SHUTTA
9 FLD/FLM
8 INHD
7 FHD
4 8FSC
PRE/ENC BOARD ... CN1
CN13
1 VDSUB
2 FH2
5 NTY
8 R-Y
9 B-Y
12 Y
15 SCCRS1
16 SCCRS2
17 H PHASE
18 SCFINE
19 OUTSEL1
20 OUTSEL2
21 OUTSEL3
24 NTSYNC
DIG PRO BOARD ... CN2
CN3
1 +0R5V
2 +2R5V
3 –5V
4 –5V
5 SYNCIN
6 VD
7 +5R2VA
8 +5R2VA
9 WHD
10 BF
11 +5R2VD
12 +5R2VD
13 CBLK
14 CSYNC
17 DLBF
18 DLCBLK
19 NTSYNC
22 Y
+0R5V
+2R5V
–5V
+5R2VA
+5R2VD
PRE/ENC BOARD ... CN12
CN22
9 RIN
13 GIN
17 BIN
5 +7V
6 +7V
21 –5V
22 –5V
–5V
PREPROCESS BOARD ...... CN1
CN16
5 RIN
9 GIN
8 BIN
PRE/ENC BOARD .... CN1
CN23
5 SHP
6 SHD
PREPROCESS BOARD ..... CN2
CN17
1 PBLK
2 OBCP
4 RPED
5 BPED
6 GPED
7 RGAIN
8 BGAIN
9 SHTSW
10 GAMMASW
12 ROUT
16 BOUT
17 GOUT
21 +5R2VA
22 +5R2VA
23 +2R5V
24 +0R5V
+2R5V
+0R5V
8FSC
SYSCON BOARD .... CN2
CN5
SYNC SW 24
SCCRS 1 22
SCCRS 2 21
H PHASE 20
SCFINE 19
OUTSEL1 16
OUTSEL2 15
OUTSEL3 14
VD 13
VDRST 12
WHD 11
+5R2VD 10
+5R2VD 9
ADC0 8
ADC1 7
ADC2 6
ADC3 5
CHARA 4
+5R2VD
Q20, Q21
+21V
+20V REGULATOR
Q22, Q23, IC8(c)
+15V REGULATOR
Q28, Q29, IC8(d)
–9V
–8R8V REGULATOR
Q24, Q25, IC8(a)
+5R2VD
+5V REGULATOR
Q26, Q27, IC8(b)
WHD
+3R5V REGULATOR
VD
Q16, Q17
Q18, Q19
+20V
BIAS CONTROL
+20V
DRIVE BOARD ........ CN2
CN24
1 +20V
2 +15V
3 –8R8V
4 +5V
5 +3R5V
7 WHD
8 VD
9 VDSUB
10 FH2
11 SUBR
12 SUBG
13 SUBB
14 SUB
15 OBCP
16 PBLK
20 SHD
21 SHP
PRE/ENC BOARD ... CN2
CN14
1 SYNCSW
2 DLCBLK
4 DLBF
5 CSYNC
6 CBLK
7 CP
8 BF
9 WHD
10 VD
11 VDRST
13 +5R2VD
14 +5R2VD
15 SYNCIN
16 PSSENS
18 G/L VDIN
19 CHARA
21 +5R2VA
22 +5R2VA
23 EXTSUB
24 VD A/M
WHD
VD
DIG PRO BOARD .... CN1
CN2
1 B-Y
4 NTY
5 R-Y
10 GOUT
11 BOUT
14 ROUT
21 8FSC
22 8FSC
POWER BOARD ......... CN1
CN22
+21V
–9V
+5R2VD
+5R2VA
1 +21V
2 +21V
9 –9V
10 –9V
12 CP
13 +5R2VD
14 +5R2VD
15 +5R2VD
16 +5R2VD
21 +5R2VA
22 +5R2VA
23 +5R2VA
24 +5R2VA
IC2(c)
REGULATOR
+5R2VA
IC2(a)
IC2(b)
REGULATOR
+5R2VA
IC1 SELECTOR
IC2(d)
REGULATOR
+5R2VA
IRISF
SWUP
ITEM
SWDOWN
PAGE
SEL1
SEL2
SEL3
A
B
C
PRE/ENC BOARD .......... CN3
CN15
1 G/L IN
4 R/PR/C
7 B/PB/NC
10 G/Y/SY
16 COMP
17 SY/COMP
20 C/NC
21 PSVID
5 +7V
6 +7V
11 –5V
12 –5V
13 VRSTSW
24 SYNC
+7V
–5V
REAR BOARD ....... CN1
CN19
24 G/LIN
6 R/PR/C
2 B/PB/NC
10 G/Y/SY
12 COMP
14 SY/COMP
18 C/NC
22 PSVID
POWER BOARD .......... CN2
CN12
5 +7V
6 +7V
7 +7V
8 +7V
11 –5V
12 –5V
13 –5V
14 –5V
17 +9R2V
19 +9R2V
18 +9R2VRCB
20 RCBSENS
21 DC12VIN
22 DC12VIN
23 DC12VIN
24 DC12VIN
–5R2V
–9R2V
PREPROCESS BOARD ...... CN3
CN18
1 R-WHTSHD
2 B-WHTSHD
3 G-WHTSHD
5 +7V
6 +7V
7 AGCCNTR
8 AGCCNTB
9 AGCCNTG
10 AWCCNT
11 –5V
12 –5V
18 CP
19 WHD
20 VD
+7
–5V
WHD
VD
SYSCON BOARD ....... CN3
CN6
SEL1 24
SEL2 23
SEL3 22
IRIS-R/A 21
+9R2V 20
+9R2V 19
IRISCNT 18
TELESW 11
WIDESW 10
NEARSW 9
FARSW 8
–5V 14
–5V 13
UPSW 17
DOWNSW 16
LEFTSW 15
RIGHTSW 12
DEFSW 7
WIPESW 6
TXD 4
RXD 2
+9R2V
–5R2V
Q3 BUFFER
Q4 BUFFER
Q5 BUFFER
Q6 BUFFER
IC3(a)
IC3(b)
IC3(d)
IC3(c)
IC7(a)
IC7(b)
+5R2VD
IC4(c)
IC4(d)
IC4(b)
IC4(a)
IC5
IC6
Q7 BUFFER
Q8 BUFFER
Q9 BUFFER
Q10 BUFFER
Q11 BUFFER
Q12 BUFFER
–5R2V
REAR BOARD .......... CN3
CN21
1 SWUP
2 SWDOWN
3 ITEM
4 PAGE
5 ZF12V
6 FOCUSCNT
7 ZOOMCNT
8 LENS+COM
9 LENS+V
10 LENS–V
13 UP
14 DOWN
15 LEFT
16 RIGHT
17 DEF
18 WIPE
19 –5V
20 –5V
21 TXD
22 RXD
REAR BOARD ..... CN2
CN20
2 GL/VDIN
3 EXTSUB
4 VDA/M
6 SYNC
7 +5R2VA
8 +5R2VA
11 RCBSENS
12 +9R2VRCB
13 +9R2V
14 +9R2V
15 A/MCNT
16 DC12VIN
18 DC12VIN
20 DC12VIN
22 DC12VIN
17 IRISR/A
19 IRISCNT
21 IRISF
23 PSSENS
24 VRSTSW
+5R2V
Q1, Q2
A/M CONTROL

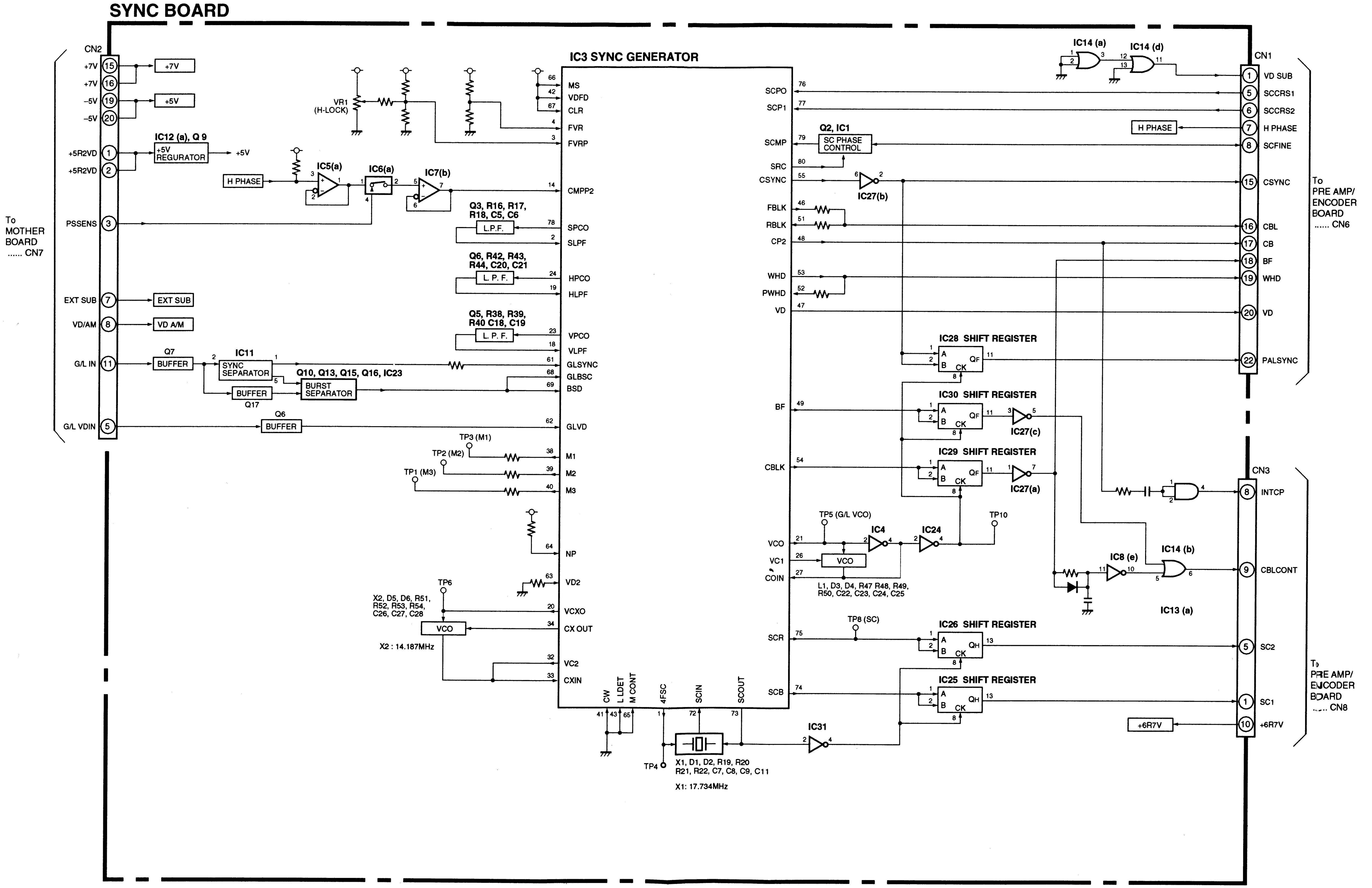
# BLOCK DIAGRAM OF DIGITAL PROCESS BOARD


DIGITAL PROCESS BOARD
CN1
B-Y
NTY
R-Y
RIN
GIN
BIN
8FSC
To MOTHER BOARD ...... CN2
IC6 R A/D CONVERTER
IC7 G A/D CONVERTER
IC8 B A/D CONVERTER
VIN
CLK
D0
D7
CLKAD
REN
WEN
(ADDRESS BUS)
(DATA BUS)
IC1
ADR0 ADR15
D0 D7
RE
WE
LMW
CS3
CS4
ADDRESS DECODE REGISTER
RIN1 RIN8
RIN0
GIN1 GIN8
GIN0
BIN1 BIN8
BIN0
BLEMISH CORRECTION
WOBBLING CORRECTION
PHVCT
RAM
PLM
PDCV
PVSP
DATA CONVERSION
BLOCK MEMORY
ROUT0 ROUT8
GOUT0 GOUT8
BOUT0 BOUT8
PGRAM
GAMMA/KNEE
VBLK
VD
HD
NHD
CLOCK BLANKING
CLK
CLK1
IC2
RG-MIX
1H DELAY
SPECIAL OFFSET TECHNIC (Y)
0HY MIX
1HY MIX
2HY MIX
V-VBF
SW
RGO0 RGO8
LS2X
LS2Y
VBP0 VBP9
VLP0 VLP9
BO0 BO8
CLK2
IC3
A0 A6
CONTROL
BLANKING WHITE CLIP
COLOR BAR GENERATOR
RG0 RG9
R/G SEPARATOR
B0-B8
MASKING
SPECIAL OFFSET TECHNIC
Y/R-Y G-Y/B-Y MATRIX
OUTPUT
Y
CHROMA APERURE
8FSC1
4FSC1
CLK2IN
CLKIN
CLKLSI
LSI3CLK
CLK2LSI
LSI3CLK2
CAPC
ENH0 ENH8
NBLK
NTSC0 NTSC9
RYR0 RYR9
BYB0 BYB9
CLKDA2
YG0 YG9
CLKDA1
IC17 D/A CONVERTER
IC20 D/A CONVERTER
IC18 D/A CONVERTER
IC19 D/A CONVERTER
DB1 DB10
IO
VREF
CF301
CF501
CF201
CF401
IC21
REF
AV
IC4
ENHO ENH8
XSP1
XPF
IC16 (d)
IC16 (c)
NVD
SYNC DELAY
SYNC3
BLK1
XBF
SYNC1
DL SYNC
DL CBLK
DL BF
NT SYNC
2-DEMENSIONAL LOW PASS V-DETAIL
2-DEMENSIONAL CORING
CORING
H-DETAIL
LEVEL DEPENDENT
DETAIL ± CLIP
SP
BLK
NBF
PC SYNC
CN3
A05
A15
(ADDRESS BUS)
To SYSTEM CONTROL BOARD ...... CN4
CN4
LREN
LWEN
D7
D0
LMW
(DATA BUS)
To SYSTEM CONTROL BOARD ...... CN5
CN2
+0R5V
+2R5V
-5V
SYNCIN
VD
+5R2VA
WHD
BF
+5R2VD
C BLK
C SYNC
DL BF
DL CBLK
NT SYNC
Y
To MOTHER BOARD ...... CN3
IC9 (a)
IC9 (e)
IC9 (d)
IC9 (c)
IC9 (b)
IC11(a), IC14(a), IC9(f)
PULSE DIFFERENTIAL CIRCUIT
IC15(a) FREQUENCY DIVIDER
IC11(c)
IC11(d)
TP1 (8FSC1)
IC12(c)
IC12(b)
IC16(b)
CT1 (4FSC PHASE)
TP2 (8FSC2)
8FSC2
8FSC1
TP3 (4FSC1)
IC16(a)
IC11(b)
IC12(d)
IC12 (a)
4FSC1
4FSC2
CT2 (8FSC PHASE)
CT3 (4FSC-2 PHASE)
TP4 (4FSC2)
IC10 SHIFT REGISTER
SA
SB
QA
QD
IC22
VOLTAGE REGULATOR
Q1, Q2, IC5 (a)
AV REGULATOR
Q3, Q4, IC6 (b)
D5V REGULATOR
D5V

# BLOCK DIAGRAM OF SYSTEM CONTROL BOARD

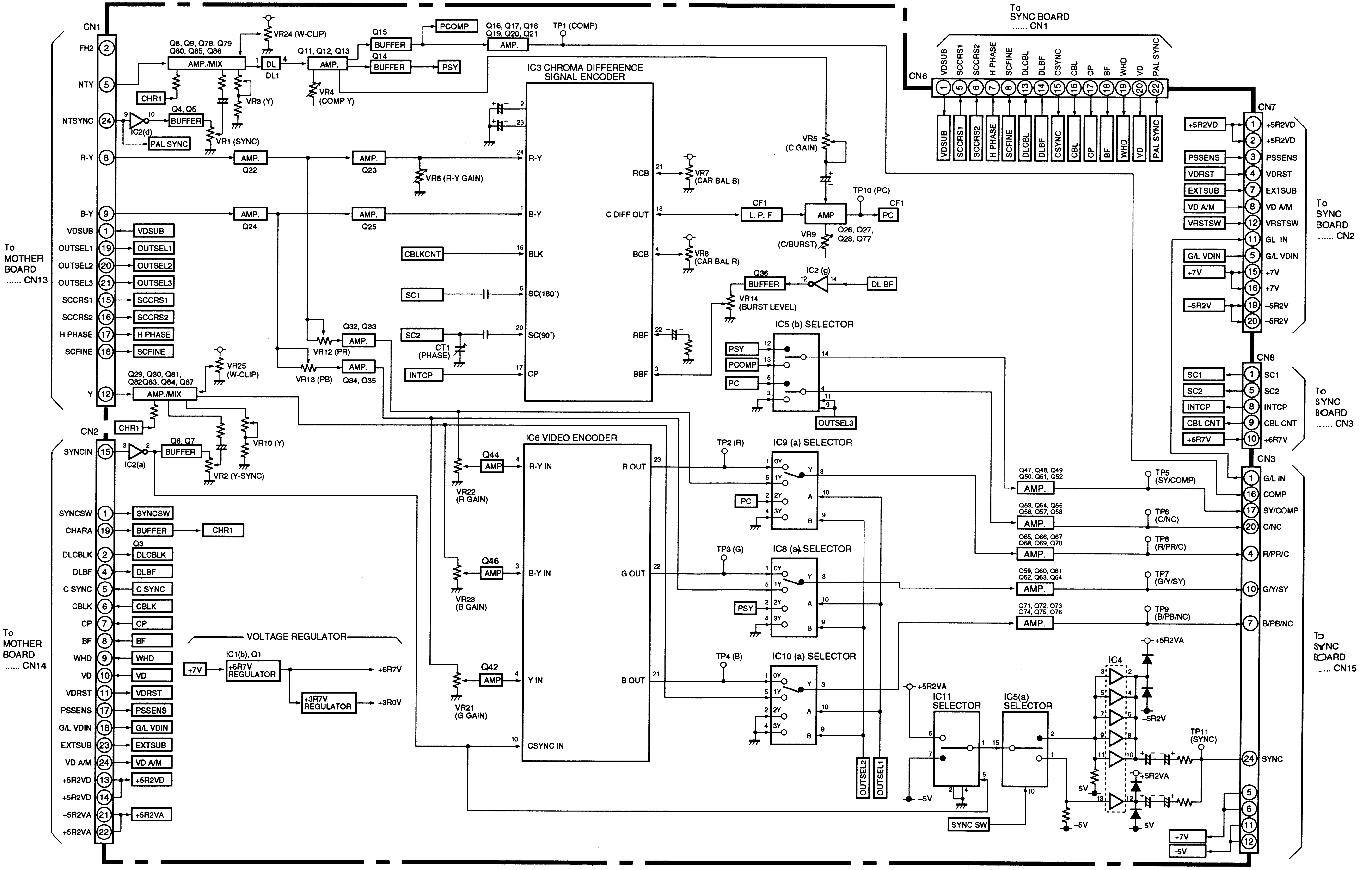

SYSTEM CONTROL BOARD
CN2(a)
CHARA 4
ADC3 5
ADC2 6
ADC1 7
ADC0 8
WHD 11
VD RST 12
VD 13
OUTSEL3 14
OUTSEL2 15
OUTSEL1 16
SC FINE 19
H PHASE 20
SC CRS2 21
SC CRS1 22
SYNC SW 24
To MOTHER BOARD ...... CN5
IC6 (a)
SHT SW
IC7 (d)
IC7 (b)
IC6 (d)
IC6 (b)
IC6 (c)
SC FINE
H PHASE
IC2 D/A CONVERTER
DAC3
ADC3
ADC2
ADC1
ADC0
TCI00
VDRST
IRQ1
DAC2
DAC1
DAC0
P10
RXD
TXD
P15
P31
P14
P16
P33
P34
P35
P37
TCI02
VREF+
VREF−
P36
SBT
SBO
TC101
VDD
IRQ2(RST2)
RST
ADR0 | ADR15
DATA0 | DATA7
P30
IRQ0
P40
REN
WEN
P41
OSC1
OSC2
AWC CNT
RXDIN
TXDOUT
GAMMA SW
IRS R/A
FLD/FLM
SEL1
SEL2
SEL3
IC9
V REF GENERATOR
A5V
−4R8V
SW1 DATA IN
X1
ADDRESS BUS
DATA BUS
SHUTTA
LMW
IC17 CHARACTER GENERATOR
WHD
VD
HD
STB
BUSY
CLK
DATA
VIDEO IN
VIDEO OUT
LOSCOUT
LOSC IN
Q12
V REF REGULATOR
D5V
IC16(a)
Q13
AMP
L1
CT1 (CHARACTER)
IC14(d)
Q9, Q10
CPU POWER SUPPLY
IC10
VOLTAGE DETECTOR
BUFFER
Q11
SHUTTB
SHUTTC
IC3 EEPROM
ADR0 | ADR15
OE
CE
DATA0 | DATA7
IC4 S-RAM
ADR0 | ADR14
WE
CS
VCC
RAM POWER SUPPLY
Q14, Q15
IC15
VOLTAGE DETECTOR
DT1 BATTERY
IC18 REAL TIME CLOCK
CLK
DATA
S1
S2
OE
VDD
Q2
Q1
IC5(b)
IC5(c)
IC5(d)
IC16(d)
IC16 (b)
IC14(c)
IC1 I/0 EXPANDER
VBLK
HBLK
SC CRS2
SC CRS1
LA0 | LA15
P13
P12
CD0
CD1
CD2
LREN
LSI
LWEN
LA0 | LA7
CD3
CD4
CD5
CD6
CLK
SIN
WEN
REN
DATA0 | DATA7
ADR0 | ADR15
CD7
P31
P21
P33
P32
P30
EROMS
RAMS
DOWN SW
VD
WHD
WIPE SW
DEF SW
TELE SW
WIDE SW
NEAR SW
FAR SW
RIGHT SW
LEFT SW
UP SW
CN4
To DIGITAL PROCESS BOARD ...... CN3
A0 | A16
CN5
LREN
LS1
LWEN
D0 | D7
LMW
To DIGITAL PROCESS BOARD ...... CN4
IC12 D/A CONVERTER
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1
LD
CLK
DI
IC13(d)
IC13(c)
IC13(b)
AMP
SC FINE
H PHASE
IRIS CNT
AGC G
R PED
G PED
B PED
B GAIN
R GAIN
CN1
AGCCNT R 18
AGCCNT B 17
AGCCNT G 16
R PED 15
G PED 13
B PED 14
B GAIN 11
R GAIN 12
SHUTT A 24
SHUTT B 23
SHUTT C 22
FLD/FLM 21
AWC CNT 10
GAMMA SW 8
SHT SW 9
To MOTHER BOARD ...... CN4
SHUTT A
SBT
SBO
FLD/FLM
AWC CNT
GAMMA SW
SHT SW
CN3
IC8(b)
RXD IN
IC8(c)
TXD OUT
RXD 2
TXD 4
WIPE SW 6
DEF SW 7
FAR SW 8
NEAR SW 9
WIDE SW 10
TELE SW 11
RIGHT SW 12
−5V 13
−5V 14
LEFT SW 15
DOWN SW 16
UP SW 17
IRIS CNT 18
+9R2V 19
+9R2V 20
IRS R/A 21
SEL3 22
SEL2 23
SEL1 24
To SYNC BOARD ...... CN2
IC19(b), Q18, Q19
−4R8V REGULATOR
−4R8V
−5V
IC19(d), Q16, Q17
+8R6V REGULATOR
+8R6V
+9R2V
WIPE SW
DEF SW
FAR SW
NEAR SW
WIDE SW
TELE SW
RIGHT
LEFT SW
DOWN SW
UP SW
IRIS CNT
IRS R/A
SEL3
SEL2
SEL1
CN2(b)
+5R2VD 9
+5R2VD 10
To MOTHER BOARD ...... CN5
D5V
A5V
IC19(a), Q20, Q21
+5V REGULATOR
+5R2VD

# BLOCK DIAGRAM OF SYNC BOARD

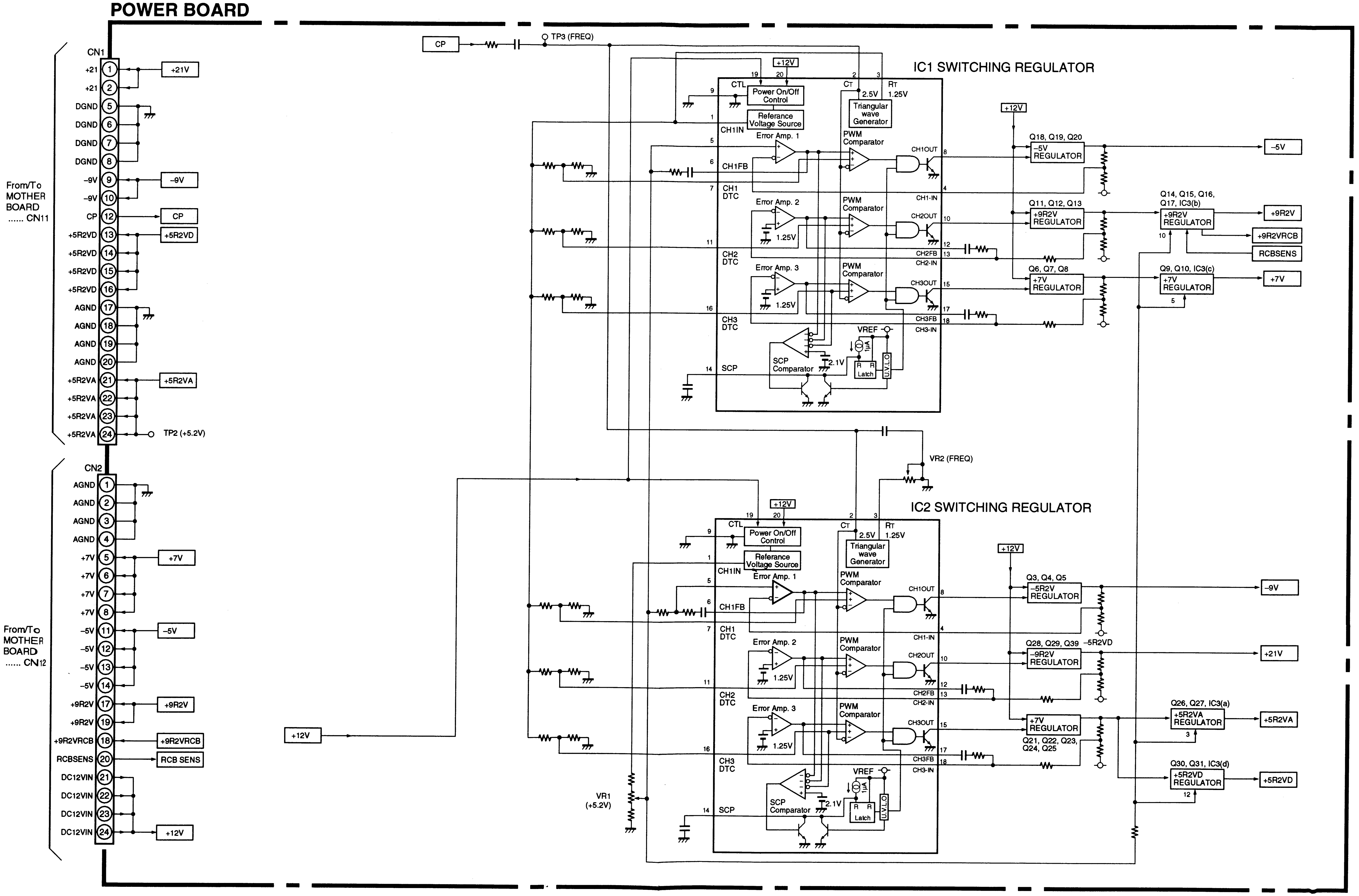

SYNC BOARD
CN2
+7V 15
+7V 16
-5V 19
-5V 20
+7V
+5V
+5R2VD 1
+5R2VD 2
IC12 (a), Q 9
+5V REGURATOR
+5V
To MOTHER BOARD ...... CN7
PSSENS 3
EXT SUB 7
VD/AM 8
G/L IN 11
G/L VDIN 5
EXT SUB
VD A/M
Q7
BUFFER
IC11
SYNC SEPARATOR
BUFFER
Q17
Q10, Q13, Q15, Q16, IC23
BURST SEPARATOR
Q6
BUFFER
VR1 (H-LOCK)
H PHASE
IC5(a)
IC6(a)
IC7(b)
Q3, R16, R17, R18, C5, C6
L.P.F.
Q6, R42, R43, R44, C20, C21
L. P. F.
Q5, R38, R39, R40 C18, C19
L. P. F.
TP3 (M1)
TP2 (M2)
TP1 (M3)
TP6
X2, D5, D6, R51, R52, R53, R54, C26, C27, C28
VCO
X2 : 14.187MHz
IC3 SYNC GENERATOR
MS
VDFD
CLR
FVR
FVRP
CMPP2
SPCO
SLPF
HPCO
HLPF
VPCO
VLPF
GLSYNC
GLBSC
BSD
GLVD
M1
M2
M3
NP
VD2
VCXO
CX OUT
VC2
CXIN
CW
L LDET
M CONT
4FSC
SCIN
SCOUT
TP4
X1, D1, D2, R19, R20 R21, R22, C7, C8, C9, C11
X1: 17.734MHz
SCPO
SCP1
SCMP
SRC
CSYNC
FBLK
RBLK
CP2
WHD
PWHD
VD
BF
CBLK
VCO
VC1
COIN
SCR
SCB
Q2, IC1
SC PHASE CONTROL
IC27(b)
IC28 SHIFT REGISTER
IC30 SHIFT REGISTER
IC27(c)
IC29 SHIFT REGISTER
IC27(a)
TP5 (G/L VCO)
IC4
IC24
TP10
VCO
L1, D3, D4, R47 R48, R49, R50, C22, C23, C24, C25
TP8 (SC)
IC26 SHIFT REGISTER
IC25 SHIFT REGISTER
IC31
IC14 (a)
IC14 (d)
IC8 (e)
IC14 (b)
IC13 (a)
H PHASE
+6R7V
CN1
1 VD SUB
5 SCCRS1
6 SCCRS2
7 H PHASE
8 SCFINE
15 CSYNC
16 CBL
17 CB
18 BF
19 WHD
20 VD
22 PALSYNC
To PRE AMP/ ENCODER BOARD ...... CN6
CN3
8 INTCP
9 CBLCONT
5 SC2
1 SC1
10 +6R7V
To PRE AMP/ ENCODER BOARD ...... CN8

# BLOCK DIAGRAM OF PREAMP/ENCODER BOARD (ENCODER SECTION)

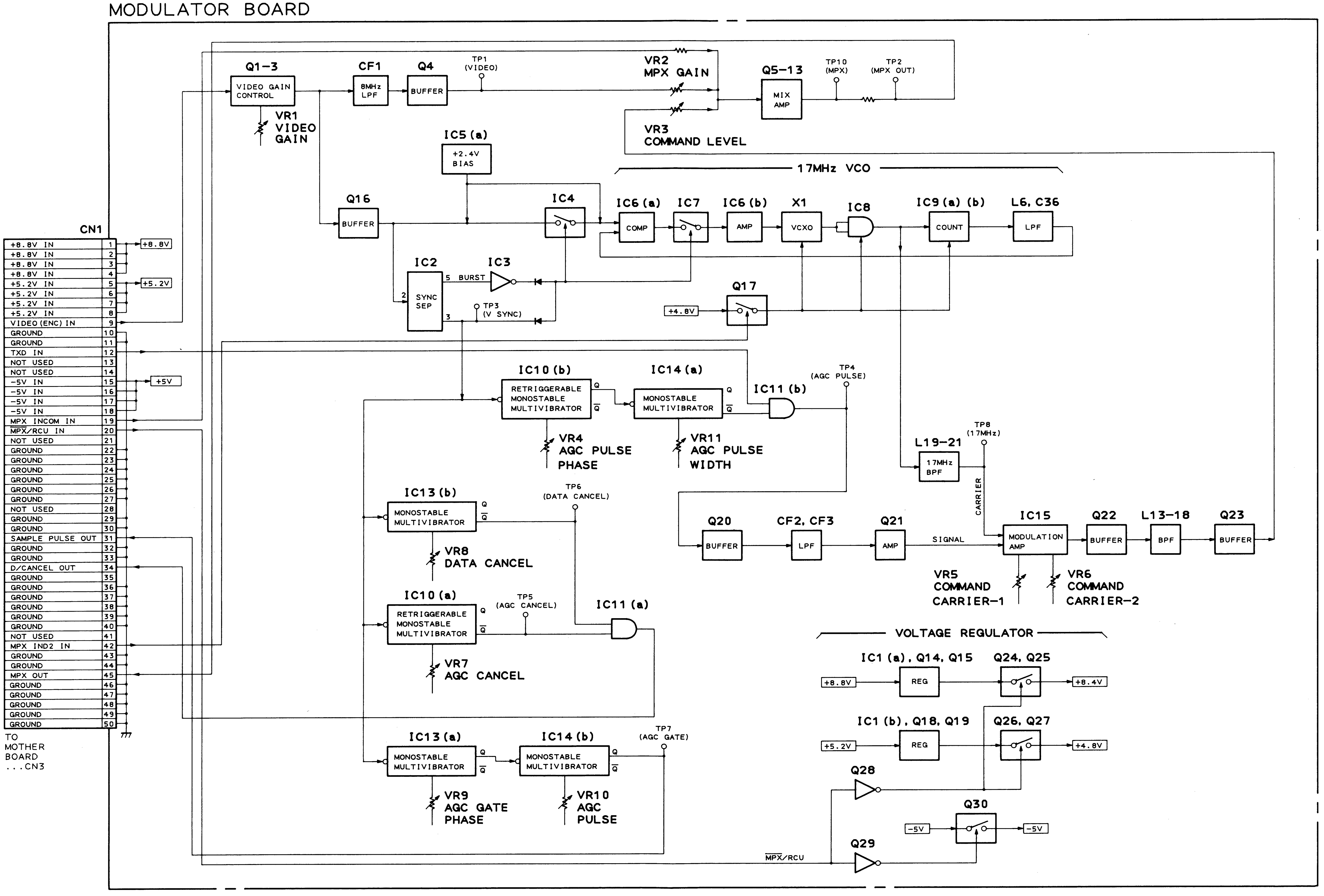
## ENCODER SECTION


CN1
To MOTHER BOARD ...... CN13
FH2 ②
NTY ⑤
NTSYNC ㉔
R-Y ⑧
B-Y ⑨
VDSUB ①
OUTSEL1 ⑲
OUTSEL2 ⑳
OUTSEL3 ㉑
SCCRS1 ⑮
SCCRS2 ⑯
H PHASE ⑰
SCFINE ⑱
Y ⑫
Q8, Q9, Q78, Q79 Q80, Q85, Q86
AMP./MIX
VR24 (W-CLIP)
DL
DL1
Q11, Q12, Q13
AMP.
VR4 (COMP Y)
Q15
BUFFER
Q14
BUFFER
PCOMP
PSY
Q16, Q17, Q18 Q19, Q20, Q21
AMP.
TP1 (COMP)
CHR1
VR3 (Y)
Q4, Q5
BUFFER
IC2(d)
VR1 (SYNC)
PAL SYNC
AMP.
Q22
AMP.
Q23
VR6 (R-Y GAIN)
AMP.
Q24
AMP.
Q25
CBLKCNT
SC1
SC2
CT1 (PHASE)
INTCP
Q32, Q33
AMP.
VR12 (PR)
AMP.
VR13 (PB)
Q34, Q35
VR25 (W-CLIP)
Q29, Q30, Q81, Q82Q83, Q84, Q87
AMP./MIX
CHR1
VR10 (Y)
IC3 CHROMA DIFFERENCE SIGNAL ENCODER
R-Y
B-Y
BLK
SC(180°)
SC(90°)
CP
RCB
C DIFF OUT
BCB
RBF
BBF
VR7 (CAR BAL B)
VR8 (CAR BAL R)
VR5 (C GAIN)
TP10 (PC)
CF1
L. P. F
AMP
PC
Q26, Q27, Q28, Q77
VR9 (C/BURST)
Q36
BUFFER
IC2 (g)
DL BF
VR14 (BURST LEVEL)
IC5 (b) SELECTOR
PSY
PCOMP
PC
OUTSEL3
CN2
To MOTHER BOARD ...... CN14
SYNCIN ⑮
IC2(a)
Q6, Q7
BUFFER
VR2 (Y-SYNC)
SYNCSW ①
CHARA ⑲
DLCBLK ②
DLBF ④
C SYNC ⑤
CBLK ⑥
CP ⑦
BF ⑧
WHD ⑨
VD ⑩
VDRST ⑪
PSSENS ⑰
G/L VDIN ⑱
EXTSUB ㉓
VD A/M ㉔
+5R2VD ⑬
+5R2VD ⑭
+5R2VA ㉑
+5R2VA ㉒
SYNCSW
BUFFER
CHR1
Q3
DLCBLK
DLBF
C SYNC
CBLK
CP
BF
WHD
VD
VDRST
PSSENS
G/L VDIN
EXTSUB
VD A/M
+5R2VD
+5R2VA
VOLTAGE REGULATOR
+7V
IC1(b), Q1
+6R7V REGULATOR
+6R7V
+3R7V REGULATOR
+3R0V
IC6 VIDEO ENCODER
Q44
AMP
VR22 (R GAIN)
R-Y IN
Q46
AMP
VR23 (B GAIN)
B-Y IN
Q42
AMP
VR21 (G GAIN)
Y IN
CSYNC IN
R OUT
G OUT
B OUT
TP2 (R)
IC9 (a) SELECTOR
PC
TP3 (G)
IC8 (a) SELECTOR
PSY
TP4 (B)
IC10 (a) SELECTOR
OUTSEL2
OUTSEL1
+5R2VA
IC11 SELECTOR
IC5(a) SELECTOR
-5V
SYNC SW
IC4
+5R2VA
-5R2V
TP11 (SYNC)
Q47, Q48, Q49 Q50, Q51, Q52
AMP.
Q53, Q54, Q55 Q56, Q57, Q58
AMP.
Q65, Q66, Q67 Q68, Q69, Q70
AMP.
Q59, Q60, Q61 Q62, Q63, Q64
AMP.
Q71, Q72, Q73 Q74, Q75, Q76
AMP.
TP5 (SY/COMP)
TP6 (C/NC)
TP8 (R/PR/C)
TP7 (G/Y/SY)
TP9 (B/PB/NC)
To SYNC BOARD ...... CN1
CN6
VDSUB ①
SCCRS1 ⑤
SCCRS2 ⑥
H PHASE ⑦
SCFINE ⑧
DLCBL ⑬
DLBF ⑭
CSYNC ⑮
CBL ⑯
CP ⑰
BF ⑱
WHD ⑲
VD ⑳
PAL SYNC ㉒
CN7
To SYNC BOARD ...... CN2
+5R2VD ①
+5R2VD ②
PSSENS ③
VDRST ④
EXTSUB ⑦
VD A/M ⑧
VRSTSW ⑫
GL IN ⑪
G/L VDIN ⑤
+7V ⑮
+7V ⑯
-5R2V ⑲
-5R2V ⑳
CN8
To SYNC BOARD ...... CN3
SC1 ①
SC2 ⑤
INTCP ⑧
CBL CNT ⑨
+6R7V ⑩
CN3
To SYNC BOARD ...... CN15
G/L IN ①
COMP ⑯
SY/COMP ⑰
C/NC ⑳
R/PR/C ④
G/Y/SY ⑩
B/PB/NC ⑦
SYNC ㉔
⑤
⑥
⑪
⑫
+7V
-5V

# BLOCK DIAGRAM OF POWER BOARD

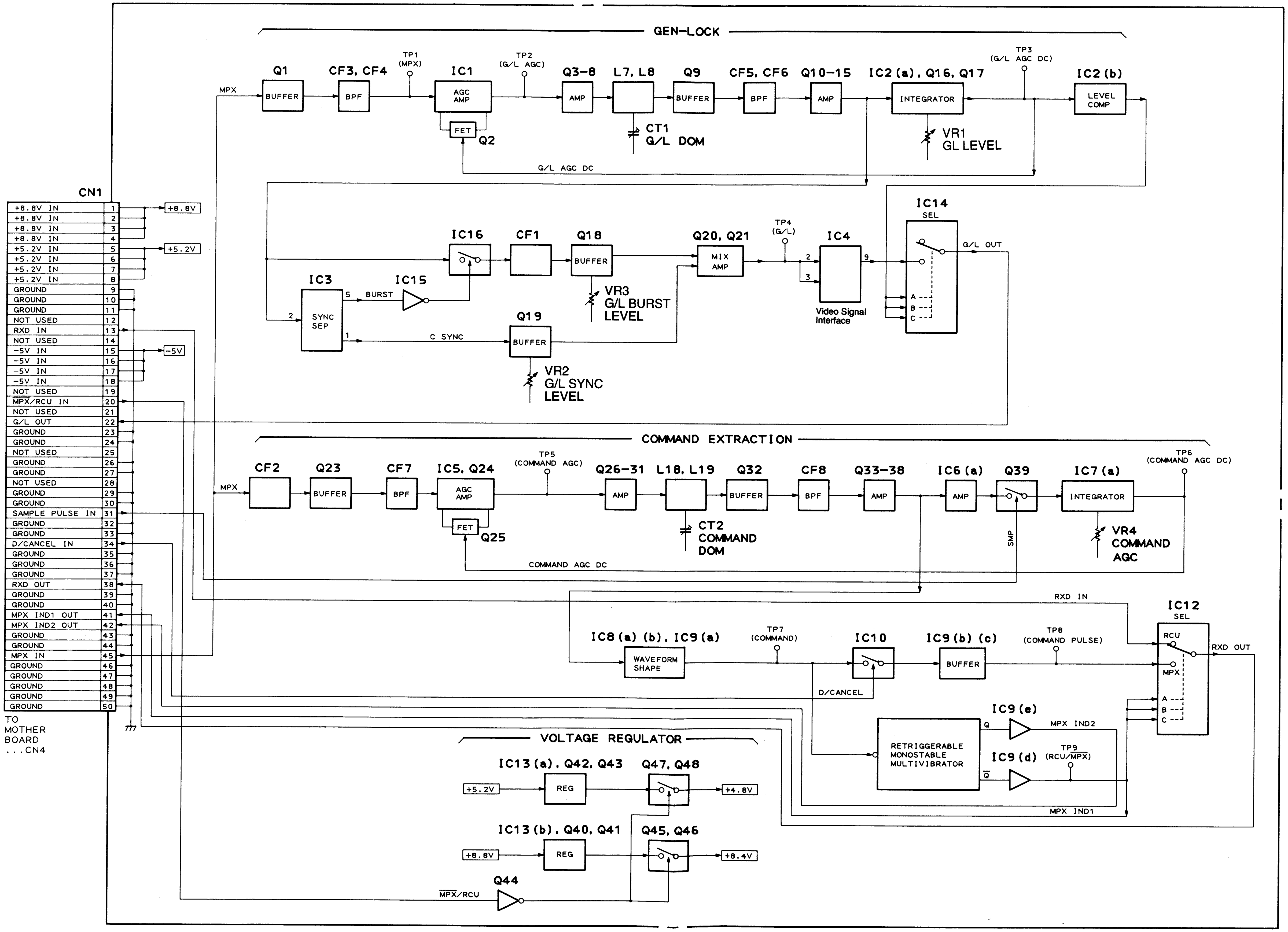

POWER BOARD
CN1
+21
+21
DGND
DGND
DGND
DGND
-9V
-9V
CP
+5R2VD
+5R2VD
+5R2VD
+5R2VD
AGND
AGND
AGND
AGND
+5R2VA
+5R2VA
+5R2VA
+5R2VA
From/To MOTHER BOARD ...... CN11
+21V
-9V
CP
+5R2VD
+5R2VA
TP2 (+5.2V)
CN2
AGND
AGND
AGND
AGND
+7V
+7V
+7V
+7V
-5V
-5V
-5V
-5V
+9R2V
+9R2V
+9R2VRCB
RCBSENS
DC12VIN
DC12VIN
DC12VIN
DC12VIN
From/To MOTHER BOARD ...... CN12
+7V
-5V
+9R2V
+9R2VRCB
RCB SENS
+12V
+12V
CP
TP3 (FREQ)
IC1 SWITCHING REGULATOR
IC2 SWITCHING REGULATOR
+12V
CTL
Power On/Off Control
Referance Voltage Source
CT
RT
2.5V
1.25V
Triangular wave Generator
CH1IN
CH1FB
CH1 DTC
CH2 DTC
CH3 DTC
SCP
Error Amp. 1
Error Amp. 2
Error Amp. 3
PWM Comparator
CH1OUT
CH1-IN
CH2OUT
CH2FB
CH2-IN
CH3OUT
CH3FB
CH3-IN
VREF
1μA
SCP Comparator
2.1V
R R Latch
U.V.L.O
VR2 (FREQ)
VR1 (+5.2V)
Q18, Q19, Q20
-5V REGULATOR
Q11, Q12, Q13
+9R2V REGULATOR
Q6, Q7, Q8
+7V REGULATOR
Q14, Q15, Q16, Q17, IC3(b)
+9R2V REGULATOR
Q9, Q10, IC3(c)
+7V REGULATOR
-5V
+9R2V
+9R2VRCB
RCBSENS
+7V
Q3, Q4, Q5
-5R2V REGULATOR
Q28, Q29, Q39
-5R2VD
-9R2V REGULATOR
+7V REGULATOR
Q21, Q22, Q23, Q24, Q25
Q26, Q27, IC3(a)
+5R2VA REGULATOR
Q30, Q31, IC3(d)
+5R2VD REGULATOR
-9V
+21V
+5R2VA
+5R2VD

# BLOCK DIAGRAM OF MODULATOR BOARD (WV-PS550)


MODULATOR BOARD
CN1
+8.8V IN 1
+8.8V IN 2
+8.8V IN 3
+8.8V IN 4
+5.2V IN 5
+5.2V IN 6
+5.2V IN 7
+5.2V IN 8
VIDEO (ENC) IN 9
GROUND 10
GROUND 11
TXD IN 12
NOT USED 13
NOT USED 14
-5V IN 15
-5V IN 16
-5V IN 17
-5V IN 18
MPX INCOM IN 19
$\overline{\text{MPX}}$/RCU IN 20
NOT USED 21
GROUND 22
GROUND 23
GROUND 24
GROUND 25
GROUND 26
GROUND 27
NOT USED 28
GROUND 29
GROUND 30
SAMPLE PULSE OUT 31
GROUND 32
GROUND 33
D/CANCEL OUT 34
GROUND 35
GROUND 36
GROUND 37
GROUND 38
GROUND 39
GROUND 40
NOT USED 41
MPX IND2 IN 42
GROUND 43
GROUND 44
MPX OUT 45
GROUND 46
GROUND 47
GROUND 48
GROUND 49
GROUND 50
+8.8V
+5.2V
+5V
TO MOTHER BOARD ...CN3
Q1-3
VIDEO GAIN CONTROL
VR1 VIDEO GAIN
CF1
8MHz LPF
Q4
BUFFER
TP1 (VIDEO)
VR2 MPX GAIN
VR3 COMMAND LEVEL
Q5-13
MIX AMP
TP10 (MPX)
TP2 (MPX OUT)
IC5 (a)
+2.4V BIAS
17MHz VCO
Q16
BUFFER
IC4
IC6 (a)
COMP
IC7
IC6 (b)
AMP
X1
VCXO
IC8
IC9 (a) (b)
COUNT
L6, C36
LPF
IC2
SYNC SEP
2
5 BURST
3
IC3
TP3 (V SYNC)
Q17
+4.8V
IC10 (b)
RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
Q
$\overline{Q}$
VR4 AGC PULSE PHASE
IC14 (a)
MONOSTABLE MULTIVIBRATOR
VR11 AGC PULSE WIDTH
IC11 (b)
TP4 (AGC PULSE)
TP8 (17MHz)
L19-21
17MHz BPF
CARRIER
IC13 (b)
MONOSTABLE MULTIVIBRATOR
VR8 DATA CANCEL
TP6 (DATA CANCEL)
Q20
BUFFER
CF2, CF3
LPF
Q21
AMP
SIGNAL
IC15
MODULATION AMP
Q22
BUFFER
L13-18
BPF
Q23
BUFFER
VR5 COMMAND CARRIER-1
VR6 COMMAND CARRIER-2
IC10 (a)
RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
TP5 (AGC CANCEL)
VR7 AGC CANCEL
IC11 (a)
VOLTAGE REGULATOR
IC1 (a), Q14, Q15
+8.8V
REG
Q24, Q25
+8.4V
IC1 (b), Q18, Q19
+5.2V
REG
Q26, Q27
+4.8V
Q28
Q30
-5V
-5V
Q29
$\overline{\text{MPX}}$/RCU
IC13 (a)
MONOSTABLE MULTIVIBRATOR
VR9 AGC GATE PHASE
IC14 (b)
MONOSTABLE MULTIVIBRATOR
VR10 AGC PULSE
TP7 (AGC GATE)

# BLOCK DIAGRAM OF DEMODURATOR BOARD (WV-PS550)

DEMODULATOR BOARD


GEN-LOCK
MPX
Q1
BUFFER
CF3, CF4
BPF
TP1 (MPX)
IC1
AGC AMP
FET
Q2
TP2 (G/L AGC)
Q3-8
AMP
L7, L8
CT1
G/L DOM
Q9
BUFFER
CF5, CF6
BPF
Q10-15
AMP
IC2 (a), Q16, Q17
INTEGRATOR
VR1
GL LEVEL
TP3 (G/L AGC DC)
IC2 (b)
LEVEL COMP
G/L AGC DC
IC16
CF1
Q18
BUFFER
VR3
G/L BURST LEVEL
IC3
SYNC SEP
IC15
BURST
C SYNC
Q19
BUFFER
VR2
G/L SYNC LEVEL
Q20, Q21
MIX AMP
TP4 (G/L)
IC4
Video Signal Interface
IC14
SEL
G/L OUT
A
B
C
CN1
+8.8V IN 1
+8.8V IN 2
+8.8V IN 3
+8.8V IN 4
+5.2V IN 5
+5.2V IN 6
+5.2V IN 7
+5.2V IN 8
GROUND 9
GROUND 10
GROUND 11
NOT USED 12
RXD IN 13
NOT USED 14
-5V IN 15
-5V IN 16
-5V IN 17
-5V IN 18
NOT USED 19
$\overline{\text{MPX}}$/RCU IN 20
NOT USED 21
G/L OUT 22
GROUND 23
GROUND 24
NOT USED 25
GROUND 26
GROUND 27
NOT USED 28
GROUND 29
GROUND 30
SAMPLE PULSE IN 31
GROUND 32
GROUND 33
D/CANCEL IN 34
GROUND 35
GROUND 36
GROUND 37
RXD OUT 38
GROUND 39
GROUND 40
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GROUND 44
MPX IN 45
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GROUND 47
GROUND 48
GROUND 49
GROUND 50
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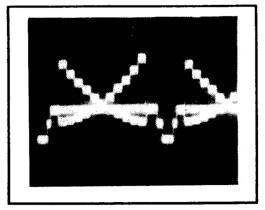
+8.8V
+5.2V
-5V
COMMAND EXTRACTION
MPX
CF2
Q23
BUFFER
CF7
BPF
IC5, Q24
AGC AMP
FET
Q25
TP5 (COMMAND AGC)
COMMAND AGC DC
Q26-31
AMP
L18, L19
CT2
COMMAND DOM
Q32
BUFFER
CF8
BPF
Q33-38
AMP
IC6 (a)
AMP
Q39
SMP
IC7 (a)
INTEGRATOR
VR4
COMMAND AGC
TP6 (COMMAND AGC DC)
RXD IN
IC8 (a) (b), IC9 (a)
WAVEFORM SHAPE
TP7 (COMMAND)
IC10
D/CANCEL
IC9 (b) (c)
BUFFER
TP8 (COMMAND PULSE)
IC12
SEL
RCU
MPX
A
B
C
RXD OUT
IC9 (e)
RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
Q
$\overline{\text{Q}}$
MPX IND2
IC9 (d)
TP9 (RCU/$\overline{\text{MPX}}$)
MPX IND1
VOLTAGE REGULATOR
IC13 (a), Q42, Q43
+5.2V
REG
Q47, Q48
+4.8V
IC13 (b), Q40, Q41
+8.8V
REG
Q45, Q46
+8.4V
Q44
$\overline{\text{MPX}}$/RCU

# SCHEMATIC DIAGRAM OF PREAMP/ENCODE

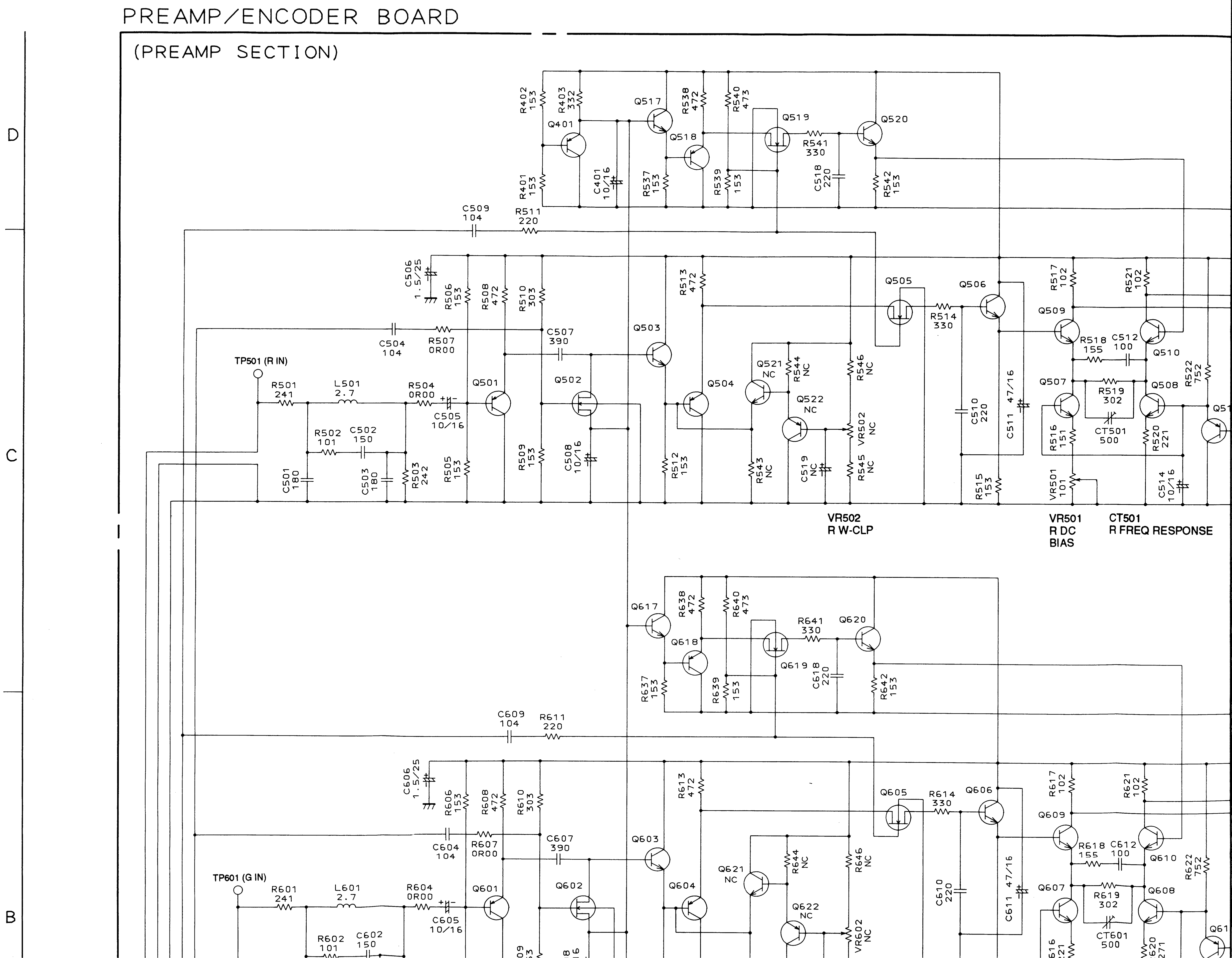
## PREAMP SECTION

1. 10µsec/DIV 0.1V/DIV



**< Index>**
**PREAMP SECTION**

| | |
|---|---|
| IC401 | A5, C5 |
| Q1 | E2 |
| Q3 | E3 |
| Q4 | E4 |
| Q5 | E4 |
| Q6 | E4 |
| Q7 | E4 |
| Q8 | D2 |
| Q9 | D2 |
| Q11 | D3 |
| Q12 | D3 |
| Q13 | D3 |
| Q14 | D4 |
| Q15 | D4 |
| Q16 | D4 |
| Q17 | D4 |
| Q18 | D4 |
| Q19 | D4 |
| Q20 | D4 |
| Q21 | D4 |
| Q22 | C2 |
| Q23 | C2 |
| Q24 | C3 |
| Q25 | C3 |
| Q26 | C5 |
| Q27 | C5 |
| Q28 | C5 |
| Q29 | B2 |
| Q30 | B2 |
| Q32 | B3 |
| Q33 | C3 |
| Q34 | B3 |
| Q35 | C3 |
| Q36 | C4 |
| Q42 | B3 |
| Q44 | B3 |
| Q46 | B3 |
| Q47 | A2 |
| Q48 | A2 |
| Q49 | A2 |
| Q50 | A2 |
| Q51 | A2 |
| Q52 | A2 |
| Q53 | A3 |
| Q54 | A3 |
| Q55 | A3 |
| Q56 | A3 |
| Q57 | A3 |
| Q58 | A3 |
| Q59 | A4 |
| Q60 | A4 |
| Q61 | A4 |
| Q62 | A4 |
| Q63 | A4 |
| Q64 | A4 |
| Q65 | A5 |
| Q66 | A5 |
| Q67 | A5 |
| Q68 | A5 |
| Q69 | A5 |
| Q70 | A5 |
| Q71 | A6 |
| Q72 | A6 |
| Q73 | A6 |
| Q74 | A6 |
| Q75 | A6 |
| Q76 | A6 |
| Q77 | C5 |
| Q78 | D2 |
| Q79 | D3 |
| Q80 | D3 |
| Q81 | B2 |
| Q82 | C2 |
| Q83 | B3 |
| Q84 | B3 |
| Q85 | D2 |
| Q86 | D3 |
| Q87 | C2 |
| Q401 | D2 |
| Q402 | C5 |
| Q403 | C5 |
| Q404 | B5 |
| Q405 | A5 |
| Q501 | C2 |
| Q502 | C2 |
| Q503 | C2 |
| Q504 | C2 |
| Q505 | C2 |
| Q506 | C3 |
| Q507 | C3 |
| Q508 | C3 |
| Q509 | C3 |
| Q510 | C3 |
| Q511 | C3 |
| Q512 | C3 |
| Q513 | C3 |
| Q514 | C4 |
| Q515 | C4 |
| Q516 | C4 |
| Q517 | D2 |
| Q518 | D2 |
| Q519 | D2 |
| Q520 | D2 |
| Q601 | B2 |
| Q602 | B2 |
| Q603 | B2 |
| Q604 | B2 |
| Q605 | B2 |
| Q606 | B3 |
| Q607 | B3 |
| Q608 | B3 |
| Q609 | B3 |
| Q610 | B3 |
| Q611 | B3 |
| Q612 | B3 |
| Q613 | B3 |
| Q614 | B4 |
| Q615 | B4 |
| Q616 | B4 |
| Q617 | C2 |
| Q618 | C2 |
| Q619 | C2 |
| Q620 | C2 |
| Q701 | A2 |
| Q702 | A2 |
| Q703 | A2 |
| Q704 | A2 |
| Q705 | A2 |
| Q706 | A3 |
| Q707 | A3 |
| Q708 | A3 |
| Q709 | A3 |
| Q710 | A3 |
| Q711 | A3 |
| Q712 | A3 |
| Q713 | A3 |
| Q714 | A4 |
| Q715 | A4 |
| Q716 | A4 |
| Q717 | B2 |
| Q718 | A2 |
| Q719 | B2 |


PREAMP/ENCODER BOARD
(PREAMP SECTION)
D
C
B
R402 153
R403 332
Q401
Q517
R538 472
R540 473
Q519
Q520
Q518
R541 330
R401 153
C401 10/16
R537 153
R539 153
C518 220
R542 153
C509 104
R511 220
C506 1.5/25
R506 153
R508 472
R510 303
R513 472
Q505
Q506
R514 330
R517 102
R521 102
Q509
C504 104
R507 0R00
C507 390
Q503
R518 155
C512 100
Q510
TP501 (R IN)
R501 241
L501 2.7
R504 0R00
Q501
Q502
Q504
Q521 NC
R544 NC
R546 NC
Q522 NC
C505 10/16
R502 101
C502 150
VR502 NC
C510 220
C511 47/16
Q507
R519 302
Q508
R522 752
CT501 500
R516 151
R520 221
C501 180
C503 180
R503 242
R505 153
R509 153
C508 10/16
R512 153
R543 NC
C519 NC
R545 NC
R515 153
VR501 101
C514 10/16
VR502
R W-CLP
VR501
R DC
BIAS
CT501
R FREQ RESPONSE
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R638 472
R640 473
R641 330
Q620
Q618
Q619
C618 220
R637 153
R639 153
R642 153
C609 104
R611 220
C606 1.5/25
R606 153
R608 472
R610 303
R613 472
Q605
R614 330
Q606
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R621 102
Q609
C604 104
R607 0R00
C607 390
Q603
R618 155
C612 100
Q610
R644 NC
R646 NC
Q621 NC
Q622 NC
C610 220
C611 47/16
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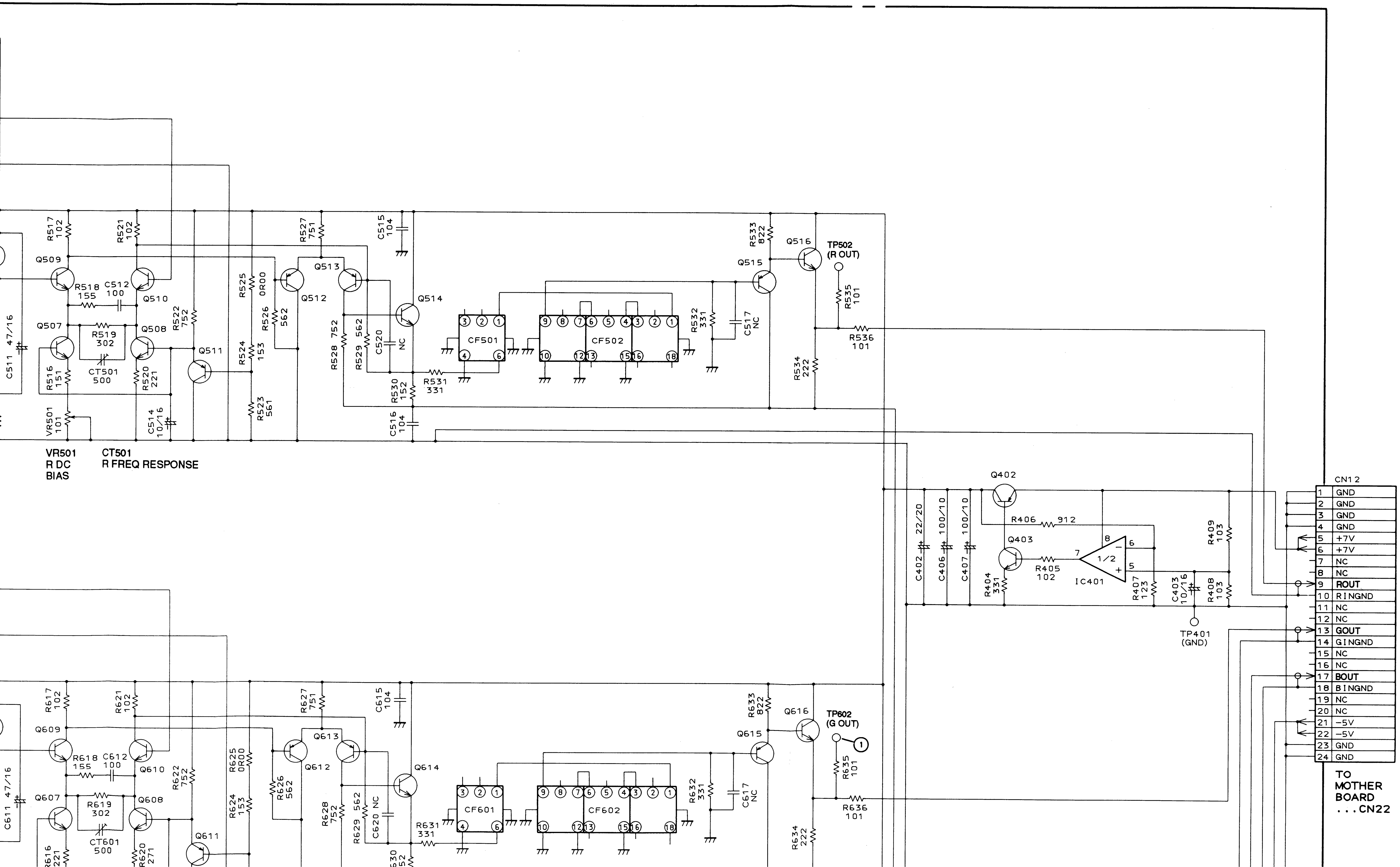
TP601 (G IN)
R601 241
L601 2.7
R604 0R00
Q601
Q602
Q604
C605 10/16
VR602 NC
Q607
R619 302
Q608
CT601 500
R602 101
C602 150

# F PREAMP/ENCODER BOARD (PRE AMP SECTION) (WV-E550E)


R517 102
R521 102
Q509
R518 155
C512 100
Q510
Q507
R519 302
Q508
CT501 500
C511 47/16
R516 151
R520 221
R522 752
VR501 101
C514 10/16
Q511
R525 0R00
R526 562
R524 153
R523 561
R527 751
Q513
Q512
C515 104
Q514
R528 752
R529 562
C520 NC
R530 152
R531 331
C516 104
CF501
CF502
R532 331
C517 NC
R533 822
Q515
Q516
TP502 (R OUT)
R535 101
R536 101
R534 222
VR501 R DC BIAS
CT501 R FREQ RESPONSE
Q402
Q403
R406 912
R405 102
R404 331
IC401
1/2
C402 22/20
C406 100/10
C407 100/10
R407 123
C403 10/16
R408 103
R409 103
TP401 (GND)
CN12
1 GND
2 GND
3 GND
4 GND
5 +7V
6 +7V
7 NC
8 NC
9 ROUT
10 RINGND
11 NC
12 NC
13 GOUT
14 GINGND
15 NC
16 NC
17 BOUT
18 BINGND
19 NC
20 NC
21 -5V
22 -5V
23 GND
24 GND
TO MOTHER BOARD ...CN22
R617 102
R621 102
Q609
R618 155
C612 100
Q610
Q607
R619 302
Q608
CT601 500
C611 47/16
R616 221
R620 271
R622 752
Q611
R625 0R00
R626 562
R624 153
R627 751
Q613
Q612
C615 104
Q614
R628 752
R629 562
C620 NC
R631 331
CF601
CF602
R632 331
C617 NC
R633 822
Q615
Q616
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①
R635 101
R636 101
R634 222

| | | | |
|---|---|---|---|
| Q63 | A4 | Q701 | A2 |
| Q64 | A4 | Q702 | A2 |
| Q65 | A5 | Q703 | A2 |
| Q66 | A5 | Q704 | A2 |
| Q67 | A5 | Q705 | A2 |
| Q68 | A5 | Q706 | A3 |
| Q69 | A5 | Q707 | A3 |
| Q70 | A5 | Q708 | A3 |
| Q71 | A6 | Q709 | A3 |
| Q72 | A6 | Q710 | A3 |
| Q73 | A6 | Q711 | A3 |
| Q74 | A6 | Q712 | A3 |
| Q75 | A6 | Q713 | A3 |
| Q76 | A6 | Q714 | A4 |
| Q77 | C5 | Q715 | A4 |
| Q78 | D2 | Q716 | A4 |
| Q79 | D3 | Q717 | B2 |
| | | Q718 | A2 |
| | | Q719 | B2 |
| | | Q720 | B2 |
| | | D1 | D4 |
| | | D3 | A2 |
| | | D5 | A4 |
| | | D8 | C5 |
| | | D9 | B5 |

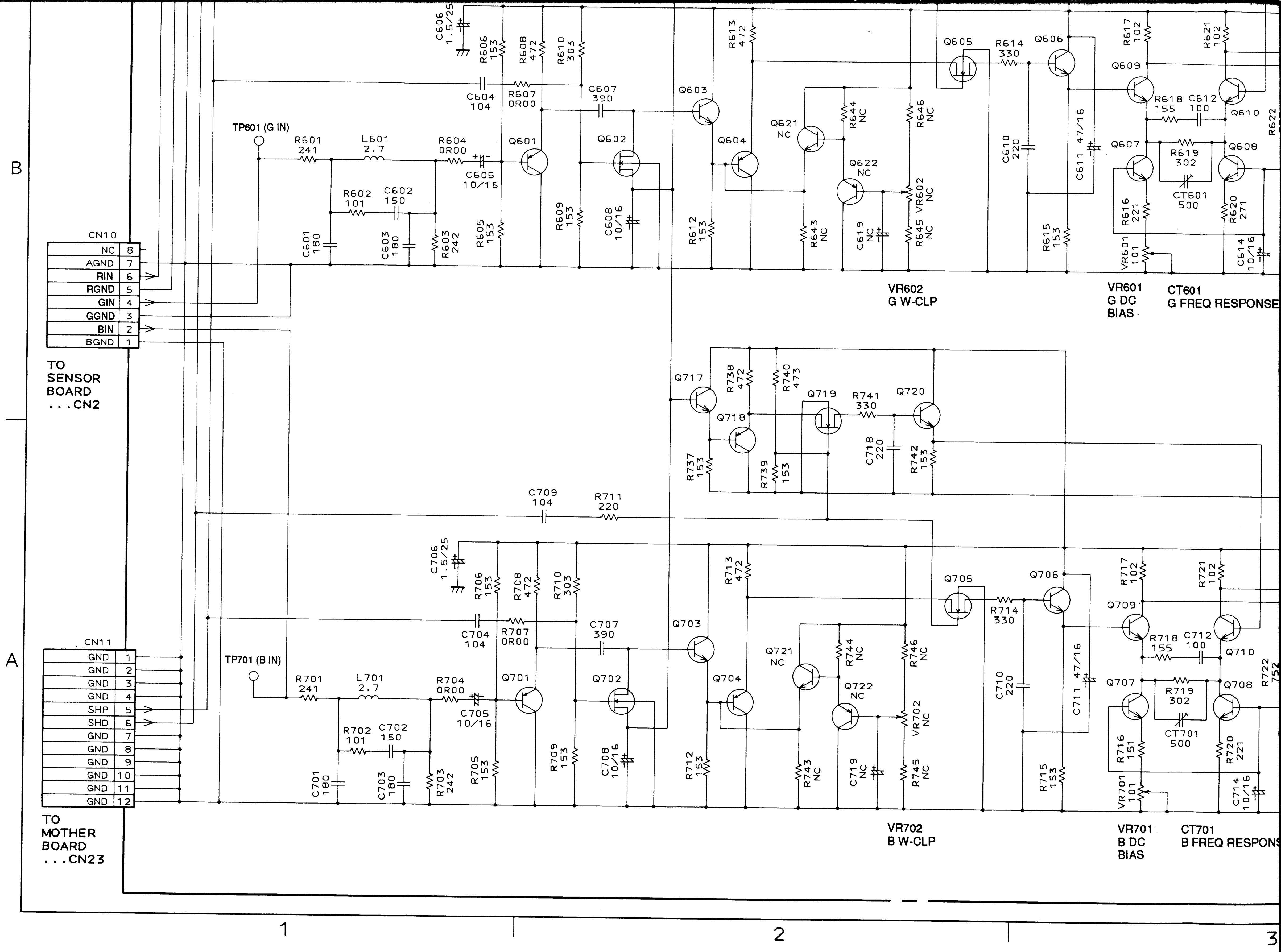
## PREAMP SECTION

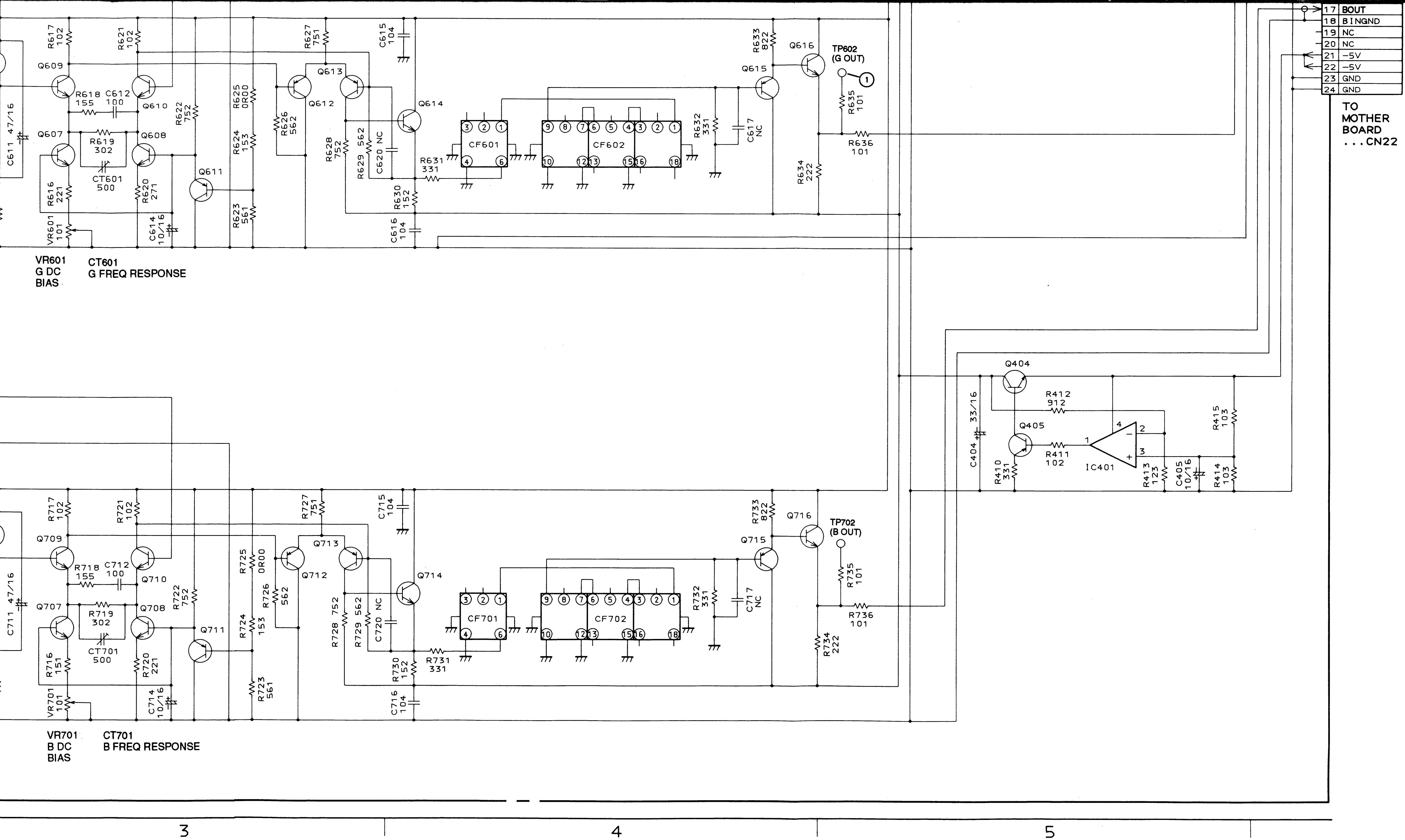
| | B | C | E |
|---|---|---|---|
| Q401 | 3.1 | 0 | 1.6 |
| 402 | 6.3 | 6.2 | 7.0 |
| 403 | 0.7 | 6.3 | 0.1 |
| 404 | -4.5 | -4.5 | -5.2 |
| 405 | -0.6 | -4.5 | 0 |
| 501 | 3.1 | 0 | 3.8 |
| 504 | 3.0 | 0 | 3.7 |
| 506 | 3.6 | 6.2 | 2.9 |
| 507 | 0.9 | 2.1 | 0.3 |
| 508 | 0.9 | 2.2 | 0.3 |
| 509 | 2.9 | 4.1 | 2.1 |
| 510 | 2.9 | 4.1 | 2.2 |
| 511 | 0.2 | 0 | 0.9 |
| 512 | 4.1 | 0 | 4.8 |
| 513 | 4.1 | 0.8 | 4.8 |
| 514 | 0.8 | 6.2 | 0 |
| 515 | 0 | -4.6 | 0.7 |
| 516 | 0.7 | 6.2 | 0 |
| 517 | 3.8 | 1.1 | 1.1 |
| 518 | 3.0 | 0 | 3.8 |
| 520 | 3.7 | 6.2 | 3.0 |
| 521 | 3.2 | 6.2 | 1.5 |
| 522 | 2.5 | 1.5 | 3.2 |
| 601 | 3.2 | 0 | 3.8 |
| 603 | 3.8 | 6.2 | 3.0 |
| 604 | 3.0 | 0 | 3.7 |
| 606 | 3.6 | 6.2 | 2.9 |
| 607 | 0.9 | 2.1 | 0.3 |
| 608 | 0.9 | 2.2 | 0.3 |
| 609 | 2.8 | 4.3 | 2.1 |
| 610 | 3.0 | 4.3 | 2.2 |

| | B | C | E |
|---|---|---|---|
| Q611 | 0.2 | 0 | 0.9 |
| 612 | 4.3 | 0 | 5.0 |
| 613 | 4.2 | 1.0 | 5.0 |
| 614 | 1.1 | 6.2 | 0.3 |
| 615 | 0.1 | -4.6 | 0.8 |
| 616 | 0.8 | 6.2 | 0.1 |
| 617 | 3.8 | 0.2 | 3.1 |
| 618 | 3.1 | 0 | 3.8 |
| 620 | 3.8 | 6.2 | 3.0 |
| 621 | 2.9 | 1.6 | 3.0 |
| 622 | 2.2 | 0 | 2.9 |
| 701 | 3.1 | 0 | 3.8 |
| 703 | 3.8 | 6.2 | 3.0 |
| 704 | 3.0 | 0 | 3.6 |
| 706 | 3.6 | 6.2 | 2.9 |
| 707 | 0.9 | 2.1 | 0.3 |
| 708 | 0.9 | 2.2 | 0.3 |
| 709 | 2.9 | 4.1 | 2.1 |
| 710 | 3.0 | 4.1 | 2.2 |
| 711 | 0.2 | 0 | 0.9 |
| 712 | 4.1 | 0 | 4.8 |
| 713 | 4.1 | 1.0 | 4.8 |
| 714 | 1.1 | 6.2 | 0.3 |
| 715 | 0.1 | -4.5 | 0.8 |
| 716 | 0.8 | 6.2 | 0 |
| 717 | 2.0 | 6.2 | 3.1 |
| 718 | 3.1 | 0 | 3.8 |
| 720 | 3.8 | 6.2 | 3.0 |
| 721 | 3.4 | 6.1 | 2.9 |
| 722 | 2.7 | 0 | 3.4 |

| | IC401 |
|---|---|
| Pin 1 | -0.6 |
| 2 | -2.6 |
| 3 | -2.6 |
| 4 | -5.1 |
| 5 | 3.5 |
| 6 | 3.5 |
| 7 | 0.7 |
| 8 | 7.0 |

| | Q502 | Q505 | Q519 | Q602 | Q605 | Q619 | Q702 | Q705 | Q719 |
|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 2.0 | 1.5 | 1.5 | 2.1 | 1.5 | 1.5 | 2.0 | 1.5 | 1.5 |
| 3 | 3.8 | 3.6 | 3.8 | 3.8 | 3.6 | 3.9 | 3.8 | 3.6 | 3.8 |
| 4 | 3.8 | 3.6 | 3.8 | 3.8 | 3.6 | 3.9 | 3.8 | 3.6 | 3.8 |


B
A
1
2
3
CN10
NC 8
AGND 7
RIN 6
RGND 5
GIN 4
GGND 3
BIN 2
BGND 1
TO SENSOR BOARD ...CN2
CN11
GND 1
GND 2
GND 3
GND 4
SHP 5
SHD 6
GND 7
GND 8
GND 9
GND 10
GND 11
GND 12
TO MOTHER BOARD ...CN23
TP601 (G IN)
TP701 (B IN)
R601 241
L601 2.7
R604 0R00
C605 10/16
R602 101
C602 150
C601 180
C603 180
R603 242
R605 153
C604 104
R607 0R00
C606 1.5/25
R606 153
R608 472
R610 303
C607 390
Q601
Q602
Q603
Q604
R609 153
C608 10/16
R612 153
R613 472
Q621 NC
R644 NC
R646 NC
Q622 NC
R643 NC
C619 NC
R645 NC
VR602 NC
Q605
R614 330
Q606
C610 220
C611 47/16
R615 153
R617 102
R621 102
Q609
R618 155
C612 100
Q610
R622
Q607
R619 302
Q608
CT601 500
R616 221
R620 271
VR601 101
C614 10/16
VR602 G W-CLP
VR601 G DC BIAS
CT601 G FREQ RESPONSE
Q717
R738 472
R740 473
Q719
R741 330
Q720
Q718
C718 220
R742 153
R737 153
R739 153
C709 104
R711 220
R701 241
L701 2.7
R704 0R00
C705 10/16
R702 101
C702 150
C701 180
C703 180
R703 242
R705 153
C704 104
R707 0R00
C706 1.5/25
R706 153
R708 472
R710 303
C707 390
Q701
Q702
Q703
Q704
R709 153
C708 10/16
R712 153
R713 472
Q721 NC
R744 NC
R746 NC
Q722 NC
R743 NC
C719 NC
R745 NC
VR702 NC
Q705
R714 330
Q706
C710 220
C711 47/16
R715 153
R717 102
R721 102
Q709
R718 155
C712 100
Q710
R722 752
Q707
R719 302
Q708
CT701 500
R716 151
R720 221
VR701 101
C714 10/16
VR702 B W-CLP
VR701 B DC BIAS
CT701 B FREQ RESPONS


R617
102
R621
102
R627
751
C615
104
R633
822
Q616
TP602
(G OUT)
①
Q609
Q613
Q615
Q612
Q614
R618
155
C612
100
Q610
R622
752
R625
0R00
R626
562
C611 47/16
Q607
R619
302
Q608
R624
153
R628
752
R629 562
C620 NC
CF601
CF602
R632
331
C617
NC
R635
101
R636
101
CT601
500
Q611
R631
331
R634
222
R616
221
R620
271
R630
152
R623
561
VR601
101
C614
10/16
C616
104
VR601
G DC
BIAS
CT601
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17
BOUT
18
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19
NC
20
NC
21
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22
-5V
23
GND
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GND
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BOARD
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R412
912
R415
103
C404 33/16
Q405
R411
102
IC401
R410
331
R413
123
C405
10/16
R414
103
R717
102
R721
102
R727
751
C715
104
R733
822
Q716
TP702
(B OUT)
Q709
Q713
Q715
R725
0R00
Q712
R718
155
C712
100
Q710
R722
752
R726
562
Q714
C711 47/16
Q707
R719
302
Q708
R724
153
R728 752
R729 562
C720 NC
CF701
CF702
R732
331
C717
NC
R735
101
R736
101
CT701
500
Q711
R734
222
R716
151
R720
221
R730
152
R731
331
R723
561
VR701
101
C714
10/16
C716
104
VR701
B DC
BIAS
CT701
B FREQ RESPONSE
3
4
5

**Note: The value indicated in the schematic diagram should be read as follows:**

☐ ☐ ☐

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Siginificant Digit (1 - 9)

**<Example>**

For Resistor:

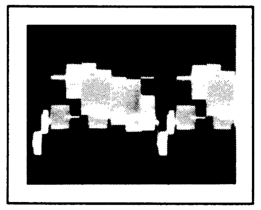
330 → 33 x $10^0$ = 33 Ω
561 → 56 x $10^1$ = 560 Ω
123 → 12 x $10^3$ = 12k Ω
0R00 = 0 Ω

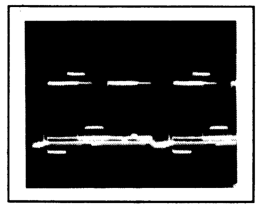
For Capacitor:

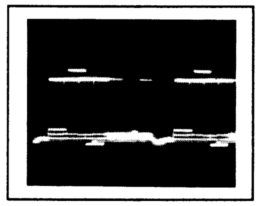
820 → 82 x $10^0$ = 82 pF
102 → 10 x $10^2$ = 1000 pF = 0.001 μF
104 → 10 x $10^4$ = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

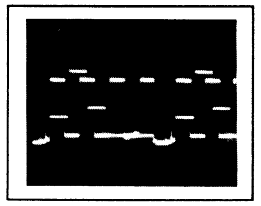
# SCHEMATIC DIAGRAM OF PREAMP/ENCODER

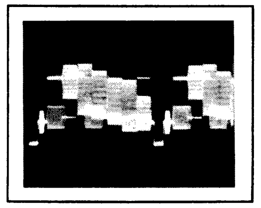
## ENCODER SECTION

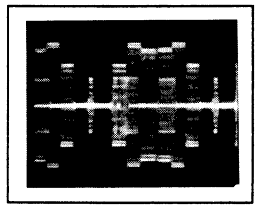

1. 10µsec/DIV 0.5V/DIV

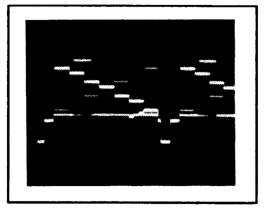

2. 10µsec/DIV 0.2V/DIV

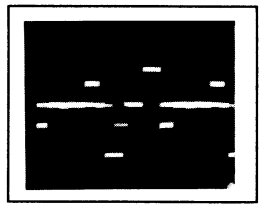

3. 10µsec/DIV 0.2V/DIV

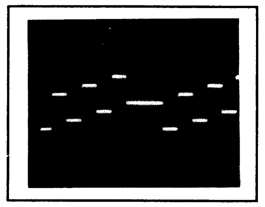

4. 10µsec/DIV 0.2V/DIV

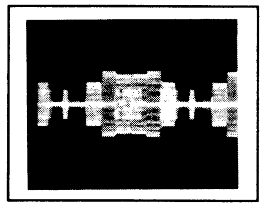

5. 10µsec/DIV 0.5V/DIV

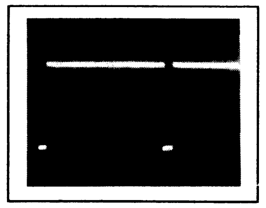

6. 10µsec/DIV 0.2V/DIV

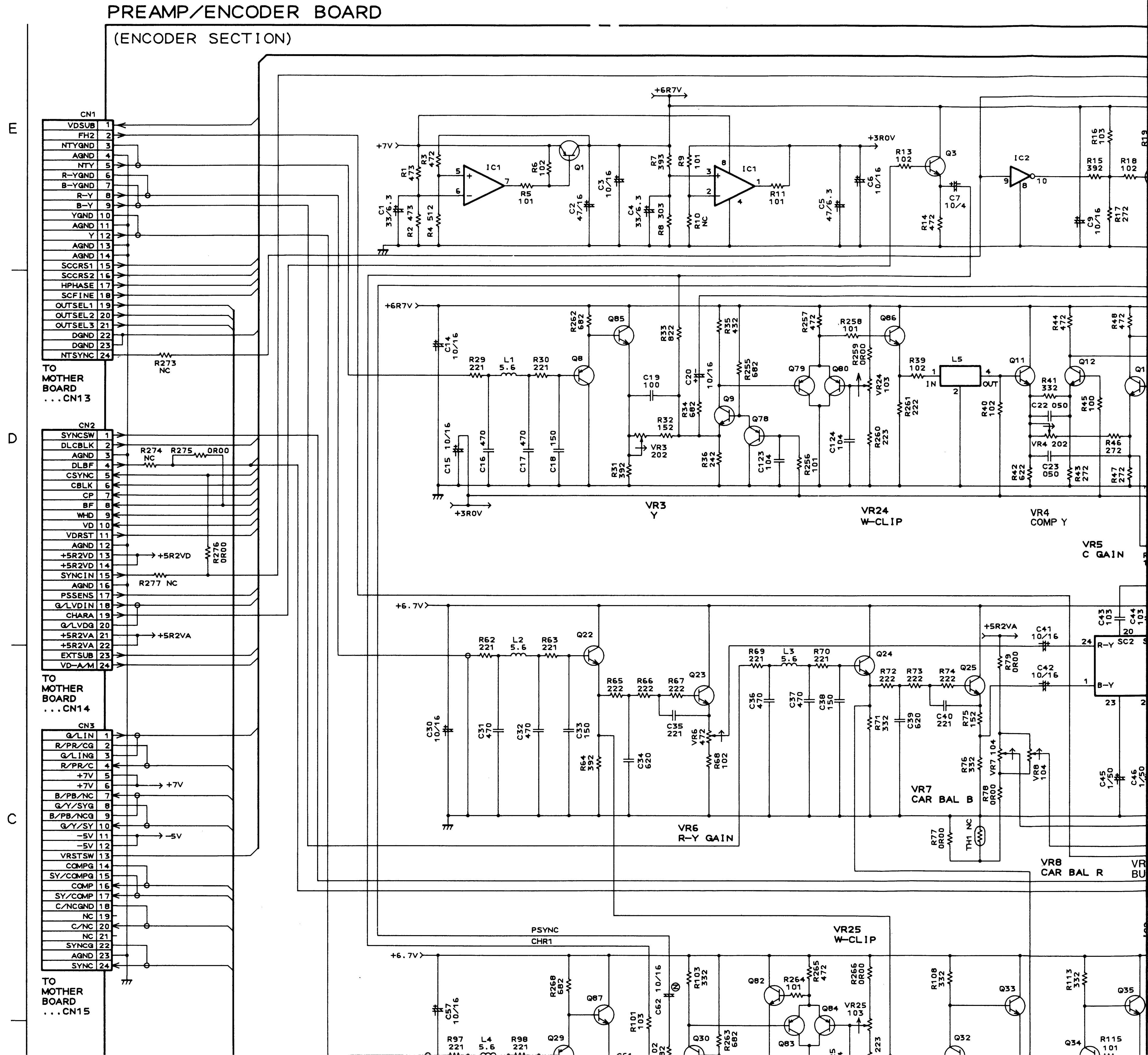

7. 10µsec/DIV 0.5V/DIV


8. 10µsec/DIV 0.5V/DIV


9. 10µsec/DIV 0.5V/DIV


10. 10µsec/DIV 0.2V/DIV

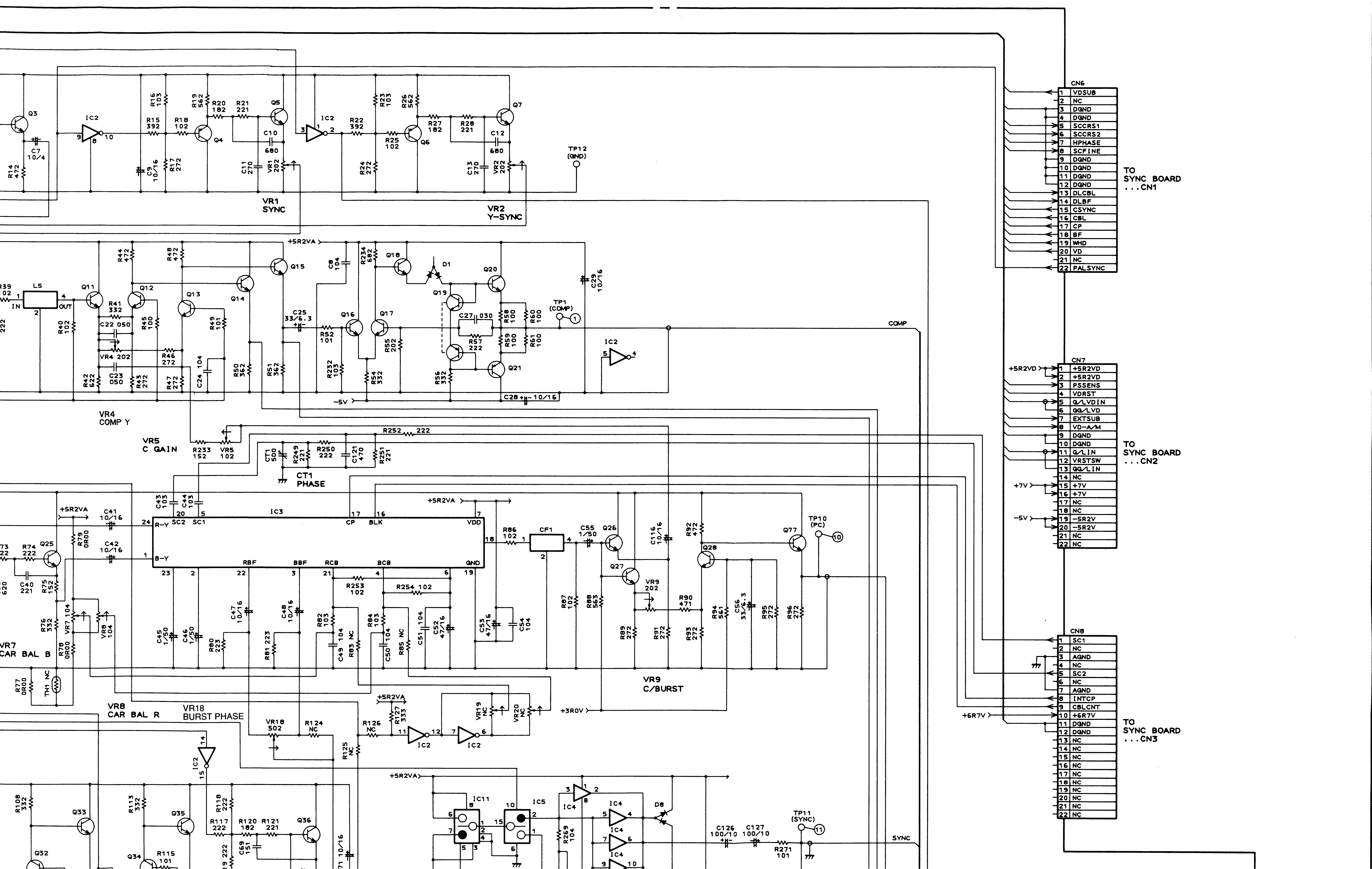

11. 10µsec/DIV 0.2V/DIV


PREAMP/ENCODER BOARD
(ENCODER SECTION)
E
D
C
CN1
VDSUB 1
FH2 2
NTYGND 3
AGND 4
NTY 5
R-YGND 6
B-YGND 7
R-Y 8
B-Y 9
YGND 10
AGND 11
Y 12
AGND 13
AGND 14
SCCRS1 15
SCCRS2 16
HPHASE 17
SCFINE 18
OUTSEL1 19
OUTSEL2 20
OUTSEL3 21
DGND 22
DGND 23
NTSYNC 24
TO MOTHER BOARD ...CN13
R273 NC
CN2
SYNCSW 1
DLCBLK 2
AGND 3
DLBF 4
CSYNC 5
CBLK 6
CP 7
BF 8
WHD 9
VD 10
VDRST 11
AGND 12
+5R2VD 13
+5R2VD 14
SYNCIN 15
AGND 16
PSSENS 17
G/LVDIN 18
CHARA 19
G/LVDG 20
+5R2VA 21
+5R2VA 22
EXTSUB 23
VD-A/M 24
TO MOTHER BOARD ...CN14
R274 NC
R275 0R00
R276 0R00
R277 NC
+5R2VD
+5R2VA
CN3
G/LIN 1
R/PR/CG 2
G/LING 3
R/PR/C 4
+7V 5
+7V 6
B/PB/NC 7
G/Y/SYG 8
B/PB/NCG 9
G/Y/SY 10
-5V 11
-5V 12
VRSTSW 13
COMPG 14
SY/COMPG 15
COMP 16
SY/COMP 17
C/NCGND 18
NC 19
C/NC 20
NC 21
SYNCG 22
AGND 23
SYNC 24
TO MOTHER BOARD ...CN15
+7V
-5V
+6R7V
+7V
+3R0V
IC1
IC2
Q1
Q3
R1 473
R2 473
R3 472
R4 512
R5 101
R6 102
R7 393
R8 303
R9 101
R10 NC
R11 101
R13 102
R14 472
R15 392
R16 103
R17 272
R18 102
C1 33/6.3
C2 47/16
C3 10/16
C4 33/6.3
C5 47/6.3
C6 10/16
C7 10/4
C9 10/16
+6R7V
C14 10/16
C15 10/16
C16 470
C17 470
C18 150
R29 221
L1 5.6
R30 221
Q8
R262 682
Q85
R33 822
C19 100
R32 152
VR3 202
R31 392
C20 10/16
R34 682
Q9
Q78
R36 242
R35 432
R255 682
C123 104
R256 101
R257 472
R258 101
Q79
Q80
Q86
R259 0R00
VR24 103
C124 104
R260 223
R261 222
R39 102
L5
IN
OUT
R40 102
Q11
Q12
R41 332
C22 050
VR4 202
C23 050
R42 622
R43 272
R44 472
R45 100
R46 272
R47 272
R48 472
+3R0V
VR3 Y
VR24 W-CLIP
VR4 COMP Y
VR5 C GAIN
+6.7V
R62 221
L2 5.6
R63 221
Q22
C30 10/16
C31 470
C32 470
C33 150
R64 392
R65 222
R66 222
R67 222
Q23
C34 620
C35 221
VR6 472
R68 102
R69 221
L3 5.6
R70 221
C36 470
C37 470
C38 150
Q24
R71 332
C39 620
R72 222
R73 222
R74 222
C40 221
Q25
R75 152
+5R2VA
R79 0R00
C41 10/16
C42 10/16
R76 332
VR7 104
VR8 104
R78 0R00
R77 0R00
TH1 NC
SC2
R-Y
B-Y
C43 103
C44 103
C45 1/50
C46 1/50
VR6 R-Y GAIN
VR7 CAR BAL B
VR8 CAR BAL R
PSYNC
CHR1
VR25 W-CLIP
+6.7V
C57 10/16
R268 682
Q87
R97 221
L4 5.6
R98 221
Q29
C62 10/16
R101 103
R103 332
Q30
R263 682
Q82
R264 101
R265 472
Q84
VR25 103
Q83
R266 0R00
R108 332
Q33
Q32
R113 332
Q35
Q34
R115 101

## < Index>
## ENCODER SECTION

| | | | |
|---|---|---|---|
| IC1 | E2 | Q52 | A2 |
| IC2 | C4, D5, E3, E4 | Q53 | A3 |
| IC3 | C4 | Q54 | A3 |
| IC4 | B5, C5 | Q55 | A3 |
| IC5 | B5 | Q56 | A3 |

# PREAMP/ENCODER BOARD (ENCODER SECTION) (WV-E550E)


VR1
SYNC
VR2
Y-SYNC
TP12
(GND)
VR4
COMP Y
VR5
C GAIN
CT1
PHASE
TP1
(COMP)
COMP
IC3
R-Y
B-Y
SC2
SC1
CP
BLK
VDD
RBF
BBF
RCB
BCB
GND
CF1
TP10
(PC)
VR9
C/BURST
VR7
CAR BAL B
VR8
CAR BAL R
VR18
BURST PHASE
TP11
(SYNC)
SYNC
+5R2VA
-5V
+3R0V
+5R2VD
+7V
-5V
+6R7V
CN6
1 VDSUB
2 NC
3 DGND
4 DGND
5 SCCRS1
6 SCCRS2
7 HPHASE
8 SCFINE
9 DGND
10 DGND
11 DGND
12 DGND
13 DLCBL
14 DLBF
15 CSYNC
16 CBL
17 CP
18 BF
19 WHD
20 VD
21 NC
22 PALSYNC
TO
SYNC BOARD
...CN1
CN7
1 +5R2VD
2 +5R2VD
3 PSSENS
4 VDRST
5 G/LVDIN
6 GG/LVD
7 EXTSUB
8 VD-A/M
9 DGND
10 DGND
11 G/LIN
12 VRSTSW
13 GG/LIN
14 NC
15 +7V
16 +7V
17 NC
18 NC
19 -5R2V
20 -5R2V
21 NC
22 NC
TO
SYNC BOARD
...CN2
CN8
1 SC1
2 NC
3 AGND
4 NC
5 SC2
6 NC
7 AGND
8 INTCP
9 CBLCNT
10 +6R7V
11 DGND
12 DGND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
TO
SYNC BOARD
...CN3

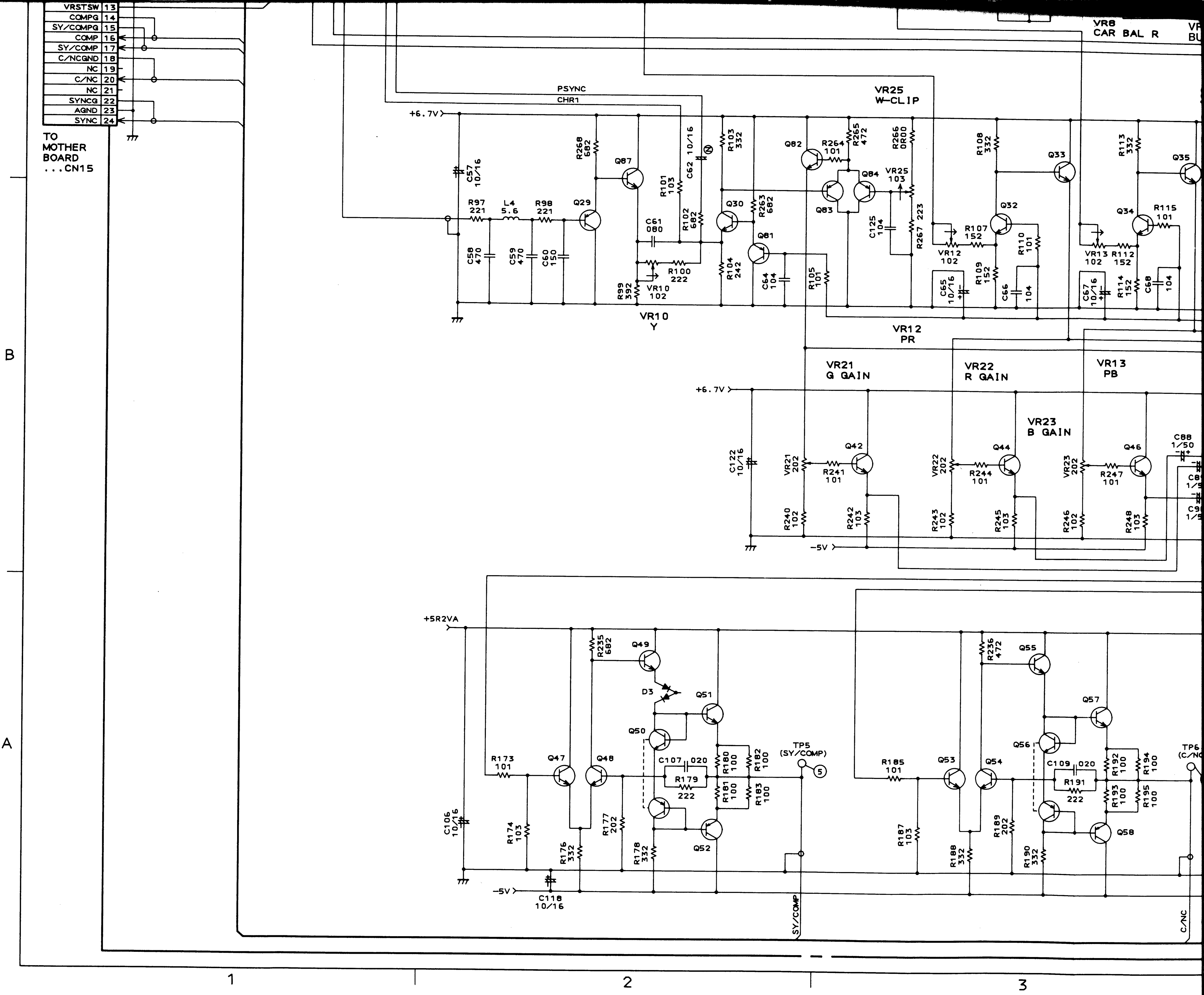
## < Index>
## ENCODER SECTION

| | |
|---|---|
| IC1 | E2 |
| IC2 | C4, D5, E3, E4 |
| IC3 | C4 |
| IC4 | B5, C5 |
| IC5 | B5 |
| IC6 | B4 |
| IC8 | B5, B6 |
| IC9 | B6 |
| IC10 | B6 |
| IC11 | C4 |
| Q1 | E2 |
| Q3 | E3 |
| Q4 | E4 |
| Q5 | E4 |
| Q6 | E4 |
| Q7 | E4 |
| Q8 | D2 |
| Q9 | D2 |
| Q11 | D3 |
| Q12 | D3 |
| Q13 | D3 |
| Q14 | D4 |
| Q15 | D4 |
| Q16 | D4 |
| Q17 | D4 |
| Q18 | D4 |
| Q19 | D4 |
| Q20 | D4 |
| Q21 | D4 |
| Q22 | C2 |
| Q23 | C2 |
| Q24 | C3 |
| Q25 | C3 |
| Q26 | C5 |
| Q27 | C5 |
| Q28 | C5 |
| Q29 | B2 |
| Q30 | B2 |
| Q32 | B3 |
| Q33 | C3 |
| Q34 | B3 |
| Q35 | C3 |
| Q36 | C4 |
| Q42 | B3 |
| Q44 | B3 |
| Q46 | B3 |
| Q47 | A2 |
| Q48 | A2 |
| Q49 | A2 |
| Q50 | A2 |
| Q51 | A2 |
| Q52 | A2 |
| Q53 | A3 |
| Q54 | A3 |
| Q55 | A3 |
| Q56 | A3 |
| Q57 | A3 |
| Q58 | A3 |
| Q59 | A4 |
| Q60 | A4 |
| Q61 | A4 |
| Q62 | A4 |
| Q63 | A4 |
| Q64 | A4 |
| Q65 | A5 |
| Q66 | A5 |
| Q67 | A5 |
| Q68 | A5 |
| Q69 | A5 |
| Q70 | A5 |
| Q71 | A6 |
| Q72 | A6 |
| Q73 | A6 |
| Q74 | A6 |
| Q75 | A6 |
| Q76 | A6 |
| Q77 | C5 |
| Q78 | D2 |
| Q79 | D3 |
| Q80 | D3 |
| Q81 | B2 |
| Q82 | C2 |
| Q83 | B3 |
| Q84 | B3 |
| Q85 | D2 |
| Q86 | D3 |
| Q87 | C2 |
| D1 | D4 |
| D3 | A2 |
| D5 | A4 |
| D8 | C5 |
| D9 | B5 |

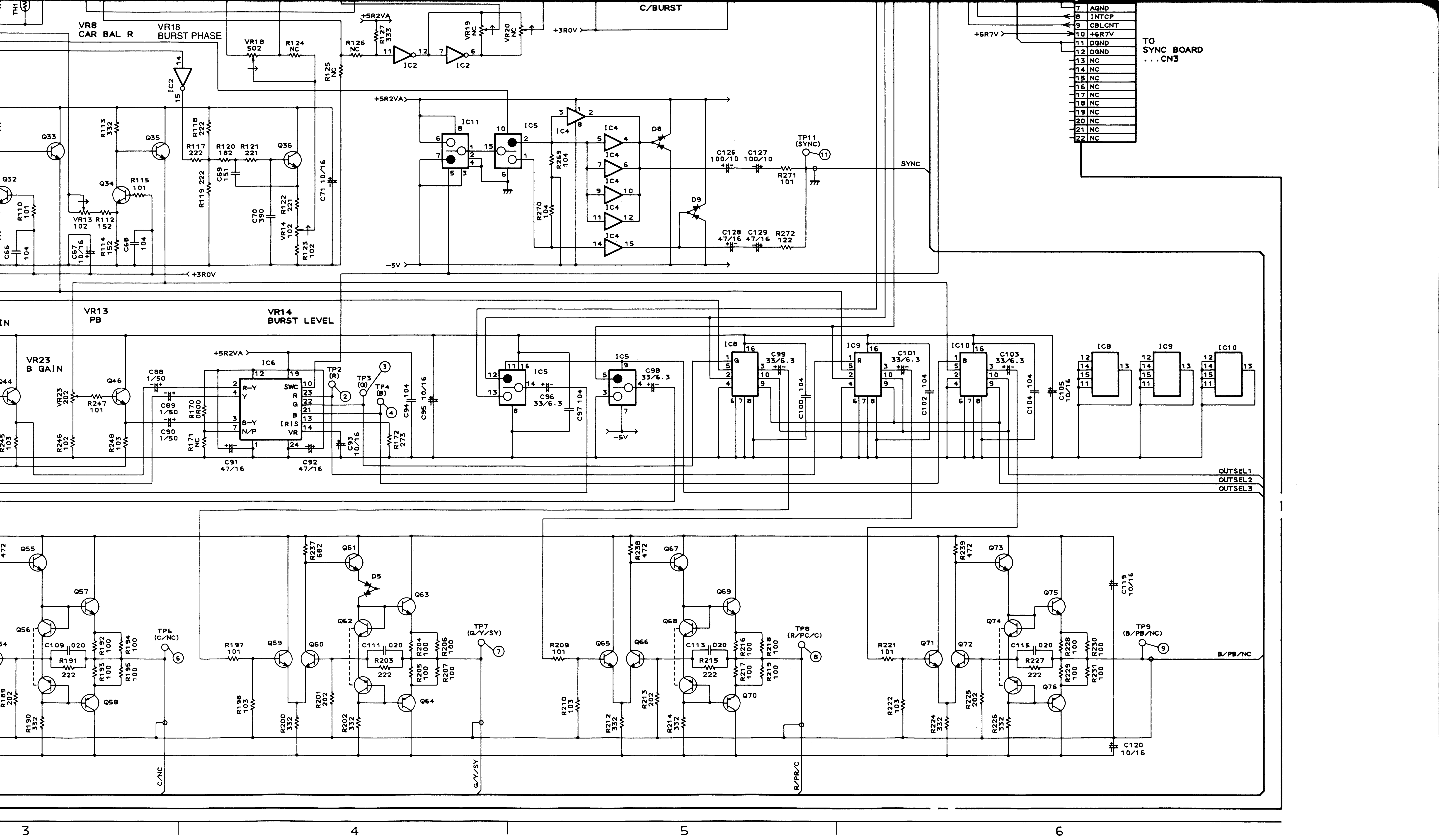
## ENCODER SECTION

| | 'B | C | E |
|---|---|---|---|
| Q16 | -0.1 | 5.2 | -0.8 |
| 17 | -0.7 | 2.6 | -0.8 |
| 18 | 2.6 | 5.2 | 1.8 |
| 20 | 0.4. | 5.2 | -0.2 |
| 21 | -0.8 | -5.2 | -0.2 |
| 36 | 2.3 | 6.7 | 1.7 |
| 71 | -0.1 | 5.2 | -0.8 |
| 72 | -0.1 | 1.3 | -0.8 |
| 73 | 1.3 | 5.2 | 0.5 |
| 75 | 0.5 | 5.2 | -0.1 |
| 76 | -0.7 | -5.2 | -0.1 |
| 66 | 4.6 | -0.1 | 3.8 |

| | Q19 | Q74 |
|---|---|---|
| Pin 1 | -1.9 | -0.1 |
| 2 | 0.4 | 0.5 |
| 3 | -0.8 | -0.7 |
| 4 | -0.2 | -0.1 |
| 5 | -0.8 | -0.7 |
| 6 | 0.4 | 0.5 |



VRSTSW 13
COMPG 14
SY/COMPG 15
COMP 16
SY/COMP 17
C/NCGND 18
NC 19
C/NC 20
NC 21
SYNCG 22
AGND 23
SYNC 24
TO MOTHER BOARD ...CN15
B
A
1
2
3
PSYNC
CHR1
+6.7V
VR8 CAR BAL R
VR25 W-CLIP
C57 10/16
R97 221
L4 5.6
R98 221
Q29
C58 470
C59 470
C60 150
R268 682
Q87
R101 103
C62 10/16
C61 080
R102 682
R99 392
VR10 102
R100 222
VR10 Y
R103 332
R263 682
Q30
Q81
R104 242
C64 104
R105 101
Q82
R264 101
R265 472
R266 0R00
Q83
Q84
VR25 103
C125 104
R267 223
R108 332
Q33
Q32
VR12 102
R107 152
R109 152
C65 10/16
C66 104
R110 101
VR12 PR
R113 332
Q35
Q34
R115 101
VR13 102
R112 152
R114 152
C67 10/16
C68 104
VR21 G GAIN
VR22 R GAIN
VR13 PB
VR23 B GAIN
C122 10/16
VR21 202
R241 101
Q42
R240 102
R242 103
VR22 202
R244 101
Q44
R243 102
R245 103
VR23 202
R247 101
Q46
R246 102
R248 103
C88 1/50
-5V
+5R2VA
R235 682
Q49
D3
Q51
Q50
R173 101
Q47
Q48
C107 020
R179 222
R180 100
R181 100
R182 100
R183 100
TP5 (SY/COMP)
5
C106 10/16
R174 103
R176 332
R177 202
R178 332
Q52
C118 10/16
SY/COMP
R185 101
Q53
Q54
R236 472
Q55
Q57
Q56
C109 020
R191 222
R192 100
R193 100
R194 100
R195 100
Q58
R187 103
R188 332
R189 202
R190 332
C/NC


C/BURST
VR8
CAR BAL R
VR18
BURST PHASE
VR18 502
R124 NC
R126 NC
R127 333
+5R2VA
R125 NC
IC2
VR19 NC
VR20 NC
+3R0V
+6R7V
7 AGND
8 INTCP
9 CBLCNT
10 +6R7V
11 DGND
12 DGND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
TO SYNC BOARD ...CN3
R113 332
Q33
Q35
R118 222
R117 222
R120 182
R121 221
Q36
Q32
Q34
R115 101
R110 101
VR13 102
R112 152
R119 222
C69 151
C70 390
R122 221
VR14 102
R123 102
C71 10/16
C66 104
C67 10/16
R114 152
C68 104
+3R0V
IC11
IC5
IC4
D8
D9
R269 104
R270 104
C126 100/10
C127 100/10
R271 101
TP11 (SYNC)
11
SYNC
C128 47/16
C129 47/16
R272 122
-5V
VR13
PB
VR14
BURST LEVEL
VR23
B GAIN
Q44
Q46
VR23 202
R247 101
R245 103
R246 102
R248 103
C88 1/50
C89 1/50
C90 1/50
R170 0R00
R171 NC
IC6
R-Y
Y
B-Y
N/P
SWC
R
G
B
IRIS
VR
C91 47/16
C92 47/16
TP2 (R)
TP3 (G)
TP4 (B)
2
3
4
C93 10/16
R172 273
C94 104
C95 10/16
C96 33/6.3
C97 104
C98 33/6.3
IC8
IC9
IC10
C99 33/6.3
C101 33/6.3
C103 33/6.3
C100 104
C102 104
C104 104
C105 10/16
OUTSEL1
OUTSEL2
OUTSEL3
Q55
Q57
Q56
C109 020
R191 222
R192 100
R193 100
R194 100
R195 100
Q58
R189 202
R190 332
TP6 (C/NC)
6
C/NC
R197 101
Q59
Q60
R237 682
Q61
D5
Q62
Q63
C111 020
R203 222
R204 100
R205 100
R206 100
R207 100
Q64
R198 103
R200 332
R201 202
R202 332
TP7 (G/Y/SY)
7
G/Y/SY
R209 101
Q65
Q66
R238 472
Q67
Q68
Q69
C113 020
R215 222
R216 100
R217 100
R218 100
R219 100
Q70
R210 103
R212 332
R213 202
R214 332
TP8 (R/PC/C)
8
R/PR/C
R221 101
Q71
Q72
R239 472
Q73
Q74
Q75
C115 020
R227 222
R228 100
R229 100
R230 100
R231 100
Q76
R222 103
R224 332
R225 202
R226 332
C119 10/16
C120 10/16
TP9 (B/PB/NC)
9
B/PB/NC
3
4
5
6

**Note:** **The value indicated in the schematic diagram should be read as follows:**

□ □ □
Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

**<Example>**

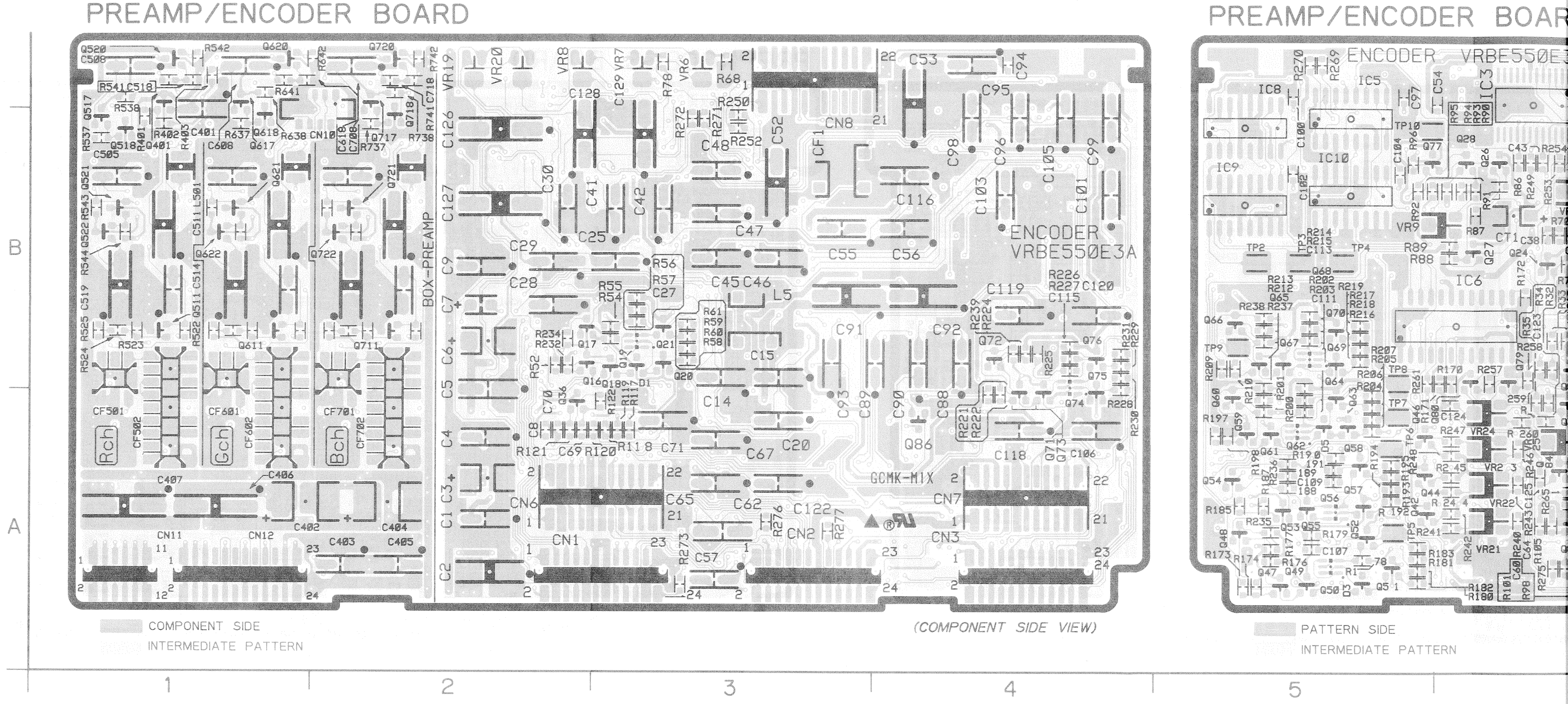
For Resistor:
330 → $33 \times 10^0$ = 33 Ω
561 → $56 \times 10^1$ = 560 Ω
123 → $12 \times 10^3$ = 12k Ω
0R00 = 0 Ω

For Capacitor:
820 → $82 \times 10^0$ = 82 pF
102 → $10 \times 10^2$ = 1000 pF = 0.001 µF
104 → $10 \times 10^4$ = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.

# CONDUCTOR VIEW OF PREAMP/ENCODER BOARD (WV-E550E)

## < Index>
## PREAMP SECTION

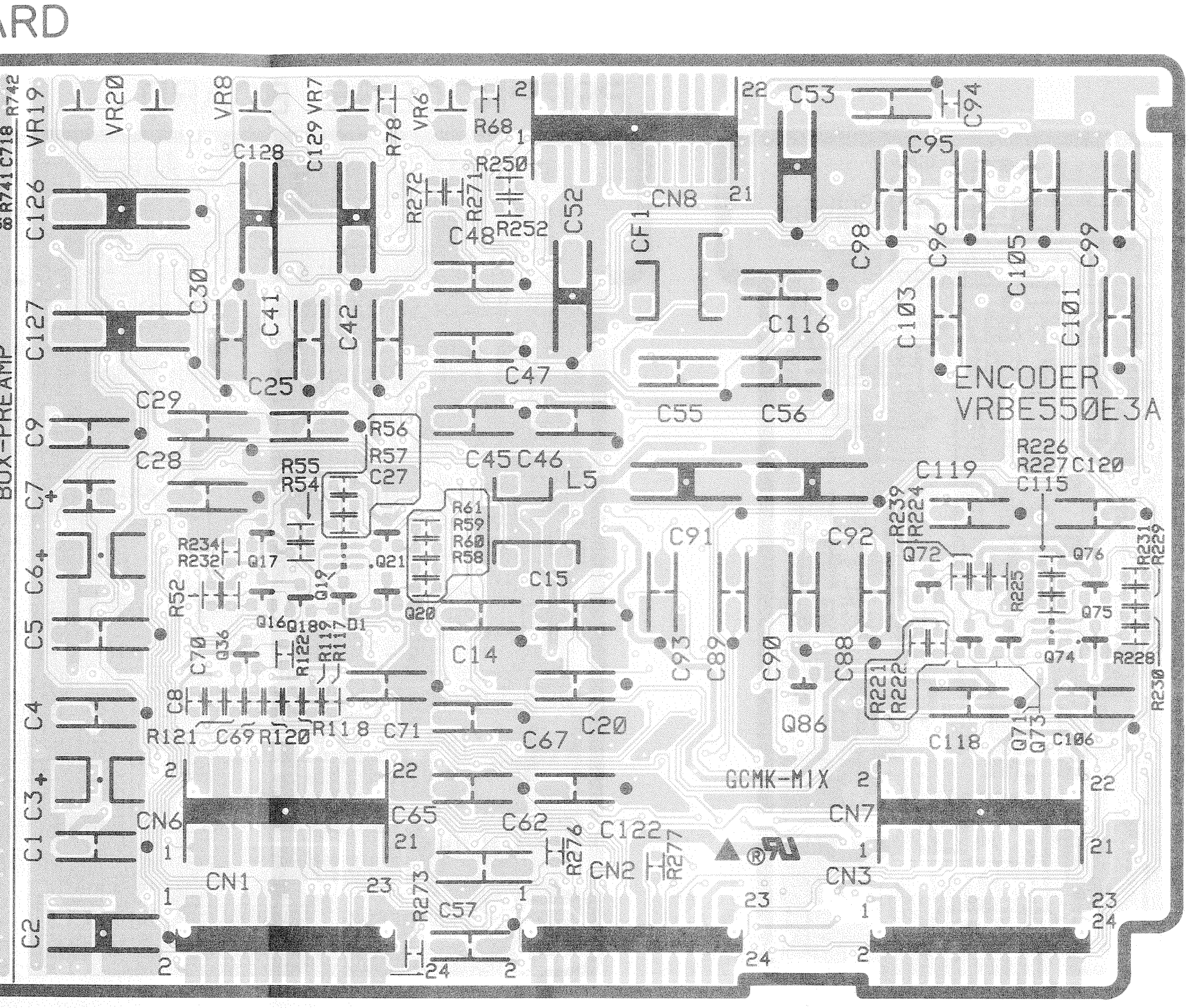
| | |
|---|---|
| IC401 | A7 |
| Q401 | C1 |
| Q402 | A8 |
| Q403 | A8 |
| Q404 | A7 |
| Q405 | A7 |
| Q501 | B8 |
| Q502 | C8 |
| Q503 | B8 |
| Q504 | B8 |
| Q505 | B8 |
| Q506 | B8 |
| Q507 | B8 |
| Q508 | B8 |
| Q509 | B8 |
| Q510 | B8 |
| Q511 | B1 |
| Q512 | B8 |
| Q513 | B8 |
| Q514 | A8 |
| Q515 | A8 |
| Q516 | A8 |
| Q517 | B1 |
| Q518 | B1 |
| Q519 | C8 |
| Q520 | C1 |
| Q601 | B8 |
| Q602 | C8 |
| Q603 | B8 |
| Q604 | B8 |
| Q605 | B8 |
| Q606 | B8 |
| Q607 | B8 |
| Q608 | B8 |
| Q609 | B8 |
| Q610 | B8 |
| Q611 | B1 |
| Q612 | B8 |
| Q613 | B8 |
| Q614 | A8 |
| Q615 | A8 |
| Q616 | A8 |
| Q617 | C1 |
| Q618 | B1 |
| Q619 | C8 |
| Q620 | C1 |
| Q701 | B7 |
| Q702 | C7 |
| Q703 | B8 |
| Q704 | B7 |
| Q705 | B7 |
| Q706 | B7 |
| Q707 | B7 |
| Q708 | B8 |
| Q709 | B7 |
| Q710 | B8 |
| Q711 | B2 |
| Q712 | B7 |
| Q713 | B7 |
| Q714 | A8 |
| Q715 | A7 |
| Q716 | A8 |
| Q717 | C2 |
| Q718 | B2 |
| Q719 | C7 |
| Q720 | C2 |


PREAMP/ENCODER BOARD
PREAMP/ENCODER BOAR
BOX-PREAMP
Rch
Gch
Bch
ENCODER VRBE550E3A
GCMK-MIX
ENCODER VRBE550E
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
PATTERN SIDE
INTERMEDIATE PATTERN
A
B
1
2
3
4
5

## < Index>
## ENCODER SECTION

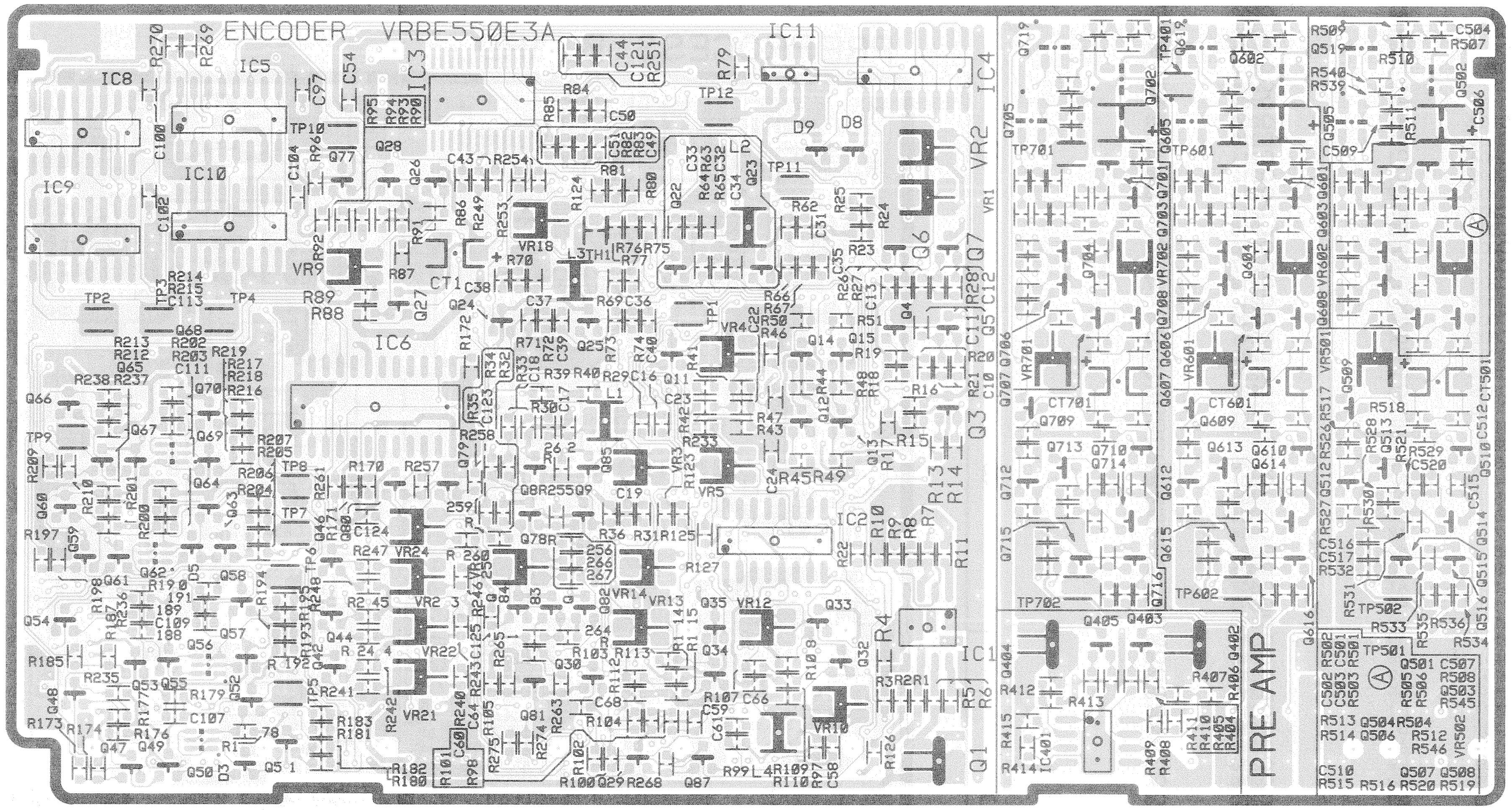
| | |
|---|---|
| IC1 | A7 |
| IC2 | A7 |
| IC3 | C6 |
| IC4 | C7 |
| IC5 | B5 |
| IC6 | B6 |
| IC8 | B5 |
| IC9 | B5 |
| IC10 | B5 |
| IC11 | C7 |
| Q1 | A7 |
| Q3 | B7 |
| Q4 | B7 |
| Q5 | B7 |
| Q6 | B7 |
| Q7 | B7 |
| Q8 | B6 |
| Q9 | A6 |
| Q11 | B6 |
| Q12 | B7 |
| Q13 | B7 |
| Q14 | B7 |
| Q15 | B7 |
| Q16 | B2 |
| Q17 | B2 |
| Q18 | B3 |
| Q19 | B3 |
| Q20 | B3 |
| Q21 | B3 |
| Q22 | B6 |
| Q23 | B7 |
| Q24 | B6 |
| Q25 | B6 |
| Q26 | B6 |
| Q27 | B6 |
| Q28 | B6 |
| Q29 | A6 |
| Q30 | A6 |
| Q32 | A7 |
| Q33 | A7 |
| Q34 | A6 |
| Q35 | A6 |
| Q36 | A2 |
| Q42 | A5 |
| Q44 | A5 |
| Q47 | A5 |
| Q48 | A5 |
| Q49 | A5 |
| Q50 | A5 |
| Q51 | A5 |
| Q52 | A5 |
| Q53 | A5 |
| Q54 | A5 |
| Q55 | A5 |
| Q56 | A5 |
| Q57 | A5 |
| Q58 | A5 |
| Q59 | A5 |
| Q60 | A5 |
| Q61 | A5 |
| Q62 | A5 |
| Q63 | A5 |
| Q64 | A5 |
| Q65 | B5 |
| Q66 | B5 |
| Q67 | B5 |
| Q68 | B5 |
| Q69 | B5 |
| Q70 | B5 |
| Q71 | A4 |
| Q72 | B4 |
| Q73 | A4 |
| Q74 | B4 |
| Q75 | A4 |
| Q76 | B4 |
| Q77 | B5 |
| Q78 | A6 |
| Q79 | B6 |
| Q80 | B6 |
| Q81 | A6 |
| Q82 | A6 |
| Q83 | A6 |
| Q84 | A6 |
| Q85 | B6 |
| Q86 | A4 |
| Q87 | A6 |
| D1 | B3 |
| D3 | A5 |
| D5 | A5 |
| D8 | B7 |
| D9 | B7 |

# CONDUCTOR VIEW OF PREAMP/ENCODER BOARD (WV-E550E)


ARD
ENCODER
VRBE550E3A
GCMK-MIX
CN1
CN2
CN3
CN6
CN7
CN8
BOX-PREAMP

(COMPONENT SIDE VIEW)

PREAMP/ENCODER BOARD


ENCODER VRBE550E3A
IC1
IC2
IC3
IC4
IC5
IC6
IC8
IC9
IC10
IC11
IC401
PRE AMP

▨ PATTERN SIDE
▨ INTERMEDIATE PATTERN

(PATTERN SIDE VIEW)

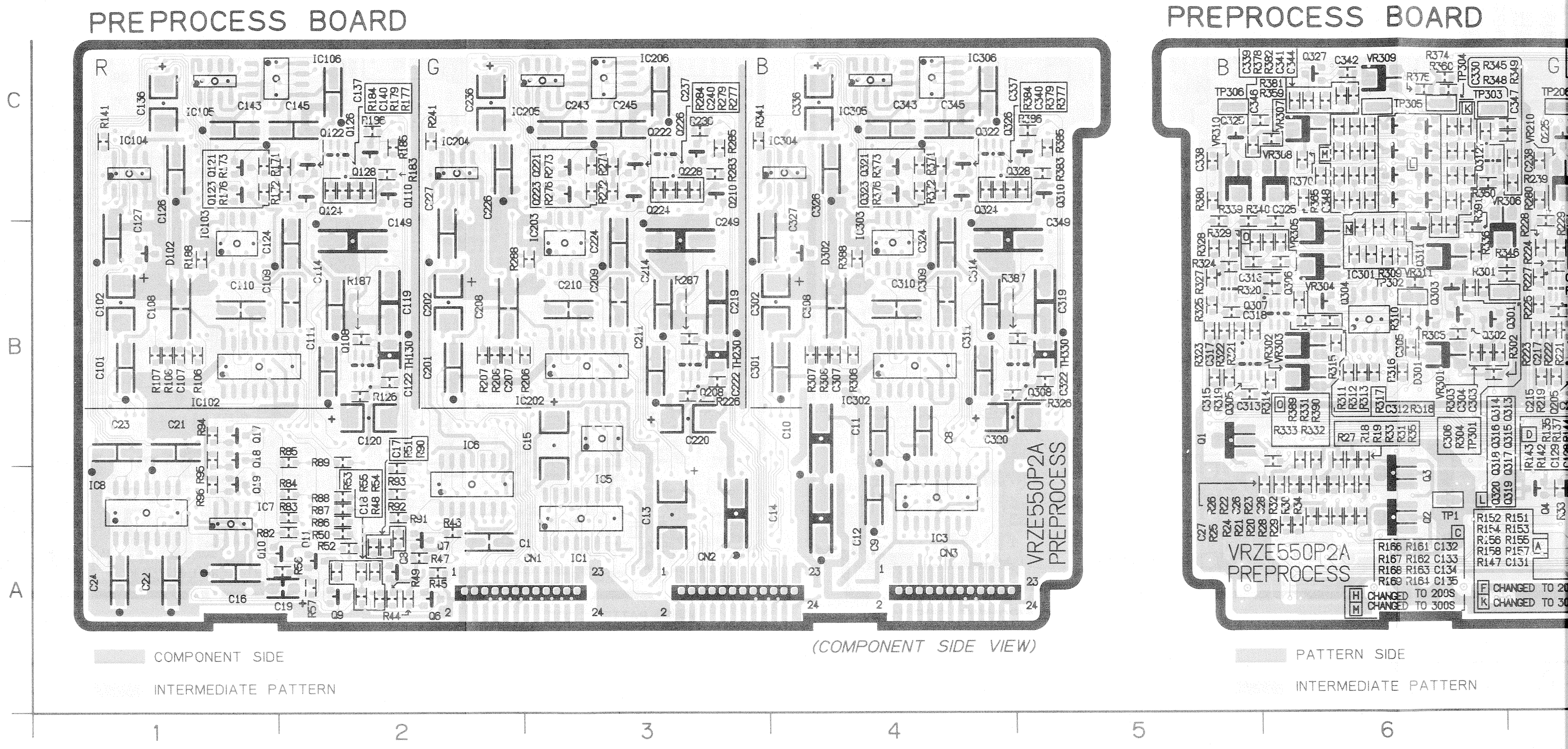
2 3 4 5 6 7 8

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7 | B6 | Q48 | A5 | Q60 | A5 | Q72 | B4 | Q84 | A6 |
| 8 | B6 | Q49 | A5 | Q61 | A5 | Q73 | A4 | Q85 | B6 |
| 9 | A6 | Q50 | A5 | Q62 | A5 | Q74 | B4 | Q86 | A4 |
| 0 | A6 | Q51 | A5 | Q63 | A5 | Q75 | A4 | Q87 | A6 |
| 2 | A7 | Q52 | A5 | Q64 | A5 | Q76 | B4 | D1 | B3 |
| 3 | A7 | Q53 | A5 | Q65 | B5 | Q77 | B5 | D3 | A5 |
| 4 | A6 | Q54 | A5 | Q66 | B5 | Q78 | A6 | D5 | A5 |
| 5 | A6 | Q55 | A5 | Q67 | B5 | Q79 | B6 | D8 | B7 |
| 6 | A2 | Q56 | A5 | Q68 | B5 | Q80 | B6 | D9 | B7 |
| 2 | A5 | Q57 | A5 | Q69 | B5 | Q81 | A6 | | |
| 4 | A5 | Q58 | A5 | Q70 | B5 | Q82 | A6 | | |
| 7 | A5 | Q59 | A5 | Q71 | A4 | Q83 | A6 | | |

# CONDUCTOR VIEW OF PREPROCESS BOARD (WV-E550E)

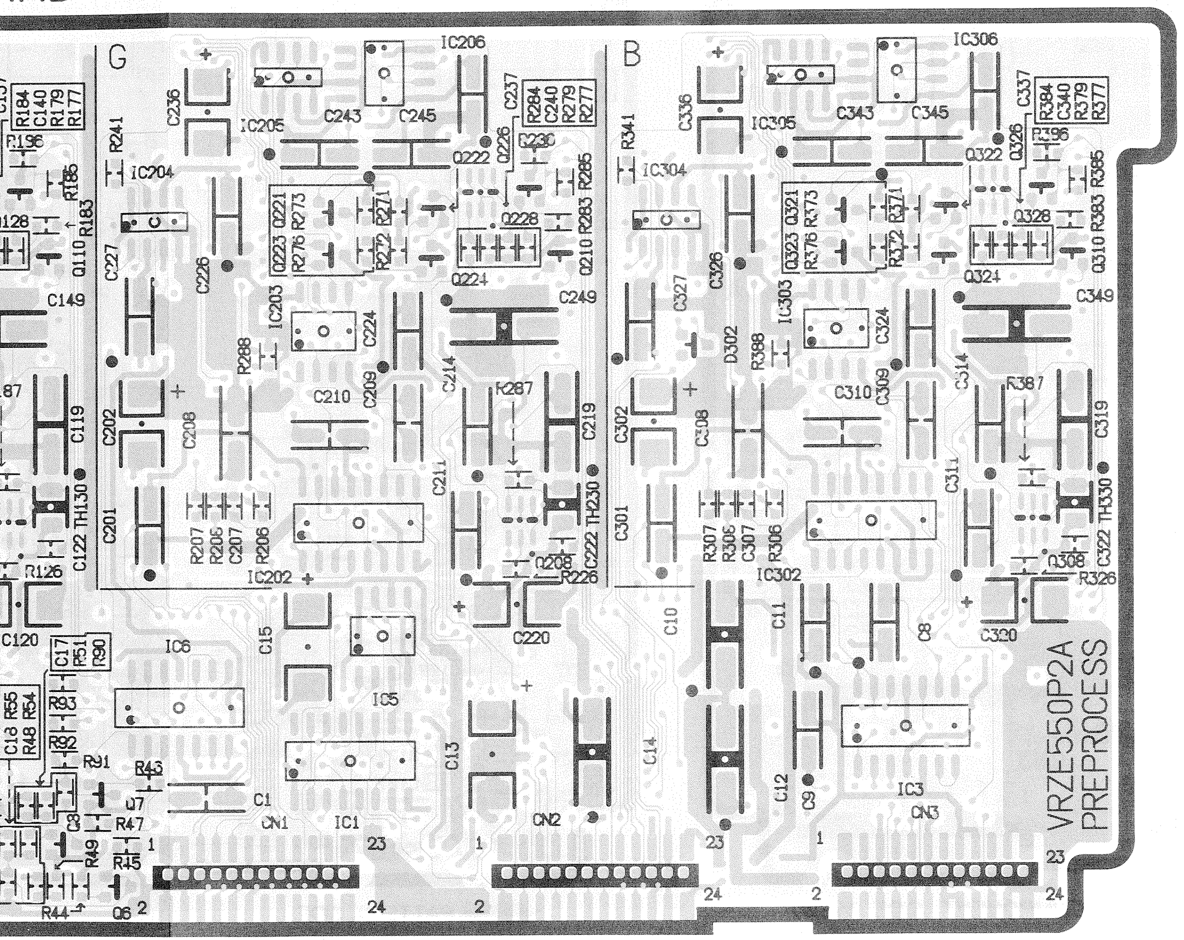
**< Index>**
**PREPROCESS BOARD**

| | |
|---|---|
| IC1 | A3 |
| IC3 | A4 |
| IC5 | B3 |
| IC6 | A2 |
| IC7 | A1 |
| IC8 | A1 |
| IC101 | B9 |
| IC102 | B1 |
| IC103 | B1 |
| IC104 | C1 |
| IC105 | C1 |
| IC106 | C2 |
| IC201 | B7 |
| IC202 | B3 |
| IC203 | B3 |
| IC204 | C2 |
| IC205 | C3 |
| IC206 | C3 |
| IC301 | B6 |
| IC302 | B4 |
| IC303 | B4 |
| IC304 | C4 |
| IC305 | C4 |
| IC306 | C4 |
| Q1 | B5 |
| Q2 | A6 |
| Q3 | A6 |
| Q4 | A7 |
| Q5 | A7 |
| Q6 | A2 |
| Q7 | A2 |
| Q8 | A2 |
| Q9 | A2 |
| Q10 | A1 |
| Q11 | A2 |
| Q12 | A9 |
| Q13 | A9 |
| Q14 | A9 |
| Q15 | A9 |
| Q16 | A9 |
| Q17 | B1 |
| Q18 | B1 |
| Q19 | A1 |
| Q101 | B9 |
| Q102 | B9 |
| Q103 | B9 |
| Q104 | B8 |
| Q105 | B8 |
| Q106 | B8 |
| Q107 | B8 |
| Q108 | B2 |
| Q110 | C2 |
| Q111 | B9 |
| Q112 | C9 |
| Q113 | C9 |
| Q114 | C9 |
| Q115 | C9 |
| Q116 | C9 |
| Q117 | C9 |
| Q118 | C9 |
| Q119 | C9 |
| Q120 | C9 |
| Q121 | C1 |
| Q122 | C2 |
| Q123 | C1 |
| Q124 | C2 |
| Q125 | C8 |
| Q126 | C2 |
| Q127 | C8 |
| Q128 | C2 |
| Q201 | B8 |
| Q202 | B8 |
| Q203 | B8 |
| Q204 | B7 |
| Q205 | B7 |
| Q206 | B7 |
| Q207 | B7 |
| Q208 | B3 |
| Q210 | C3 |
| Q211 | B7 |
| Q212 | C8 |
| Q213 | C8 |
| Q214 | C7 |
| Q215 | C8 |
| Q216 | C7 |
| Q217 | C8 |
| Q218 | C7 |
| Q219 | C8 |
| Q220 | C7 |
| Q221 | C3 |
| Q222 | C3 |
| Q223 | C3 |
| Q224 | C3 |
| Q225 | C7 |
| Q226 | C3 |
| Q227 | C7 |
| Q228 | C3 |
| Q301 | B6 |
| Q302 | B6 |
| Q303 | B6 |
| Q304 | B6 |
| Q305 | B5 |
| Q306 | B6 |
| Q307 | B5 |
| Q308 | B5 |
| Q310 | C5 |
| Q311 | B6 |
| Q312 | C6 |
| Q313 | C6 |
| Q314 | C6 |
| Q315 | C6 |
| Q316 | C6 |
| Q317 | C6 |
| Q318 | C6 |
| Q319 | C6 |
| Q320 | C6 |
| Q321 | C4 |
| Q322 | C4 |
| Q323 | C4 |
| Q324 | C4 |
| Q325 | C5 |
| Q326 | C4 |
| Q327 | C6 |
| Q328 | C5 |
| D2 | A7 |
| D101 | B9 |
| D102 | B1 |
| D201 | B8 |
| D301 | B6 |
| D302 | B4 |


PREPROCESS BOARD
PREPROCESS BOARD
R
G
B
VRZE550P2A
PREPROCESS
(COMPONENT SIDE VIEW)
COMPONENT SIDE
INTERMEDIATE PATTERN
PATTERN SIDE
INTERMEDIATE PATTERN
CHANGED TO 200S
CHANGED TO 300S
C
B
A
1
2
3
4
5
6

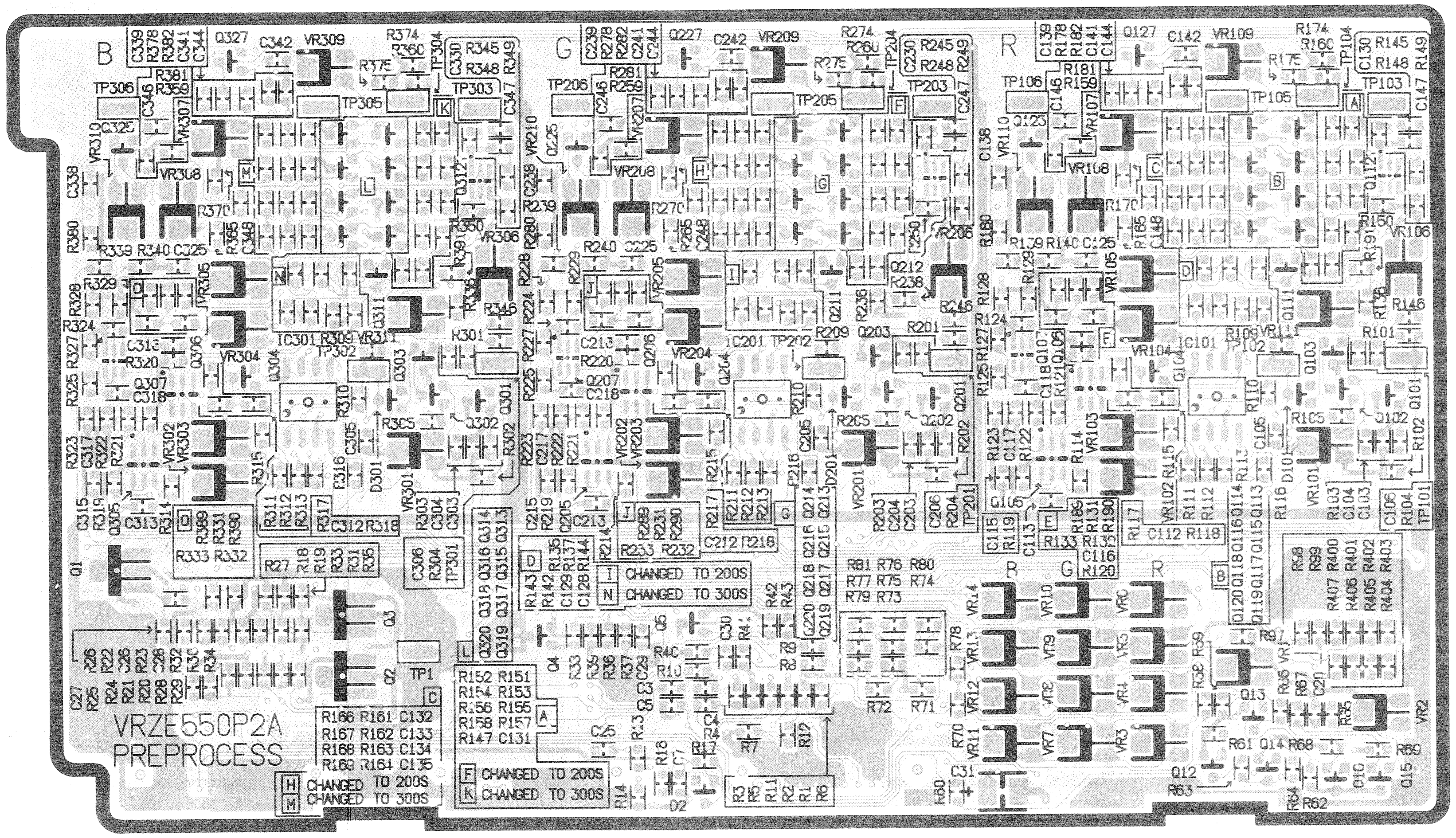
# CONDUCTOR VIEW OF PREPROCESS BOARD (WV-E550E)

ARD


G
B
IC206
IC205
IC204
IC203
IC202
IC306
IC305
IC304
IC303
IC302
IC6
IC5
IC3
IC1
CN1
CN2
CN3
VRZE550P2A
PREPROCESS

(COMPONENT SIDE VIEW)

PREPROCESS BOARD


B
G
R
IC301
IC201
IC101
TP1
VRZE550P2A
PREPROCESS
I CHANGED TO 200S
N CHANGED TO 300S
F CHANGED TO 200S
K CHANGED TO 300S
H CHANGED TO 200S
M CHANGED TO 300S

(PATTERN SIDE VIEW)

▨ PATTERN SIDE

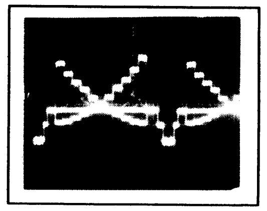
▨ INTERMEDIATE PATTERN

2 3 4 5 6 7 8 9

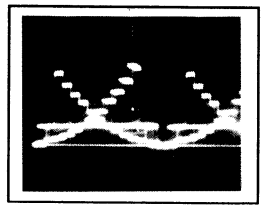
# SCHEMATIC DIAGRAM OF PREPROCES

**PREPROCESS BOARD**

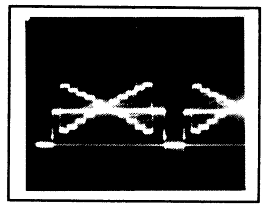
1. 10µsec/DIV 0.1V/DIV

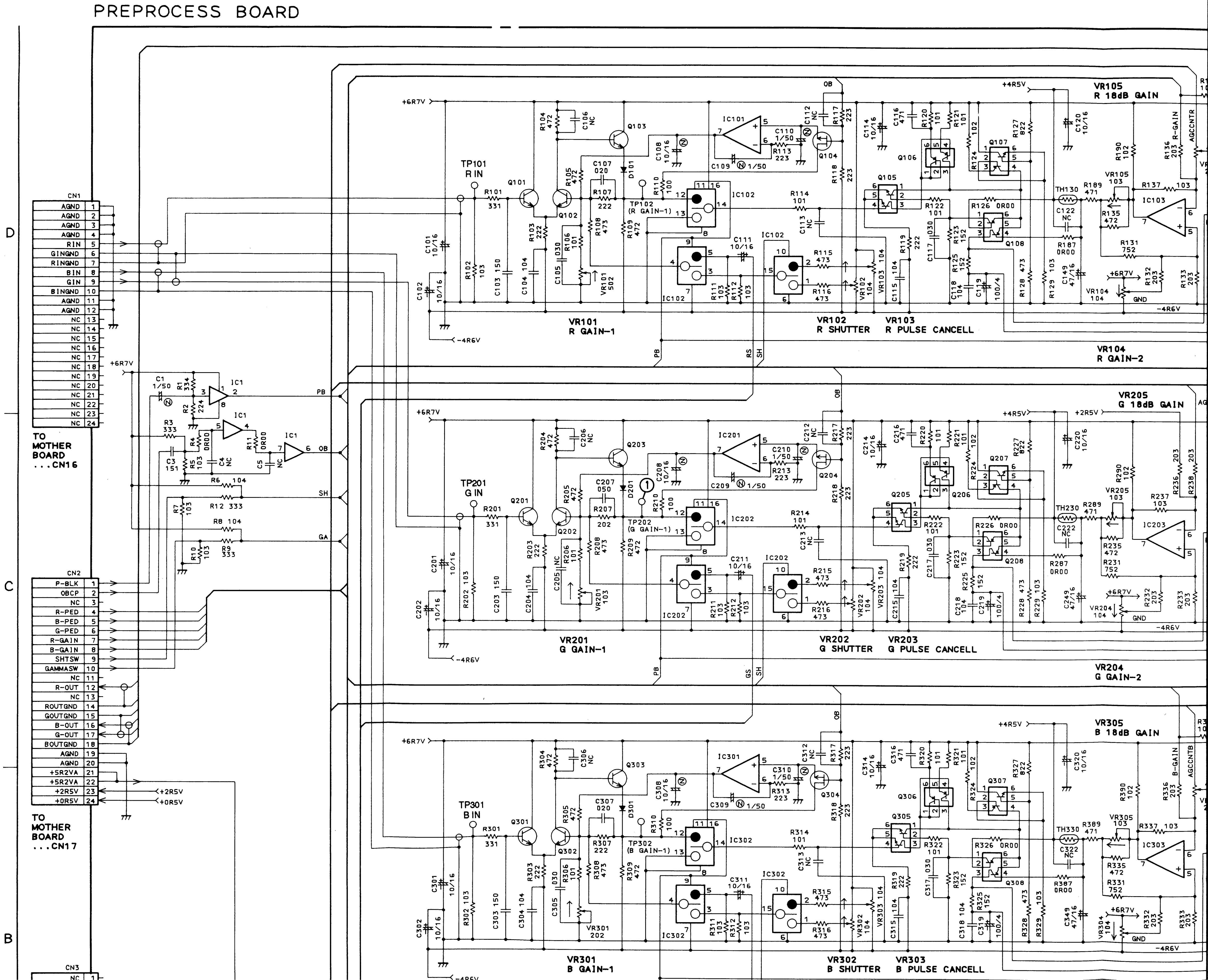


2. 10µsec/DIV 0.2V/DIV



3. 10µsec/DIV 0.5V/DIV





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## PREPROCESS BOARD

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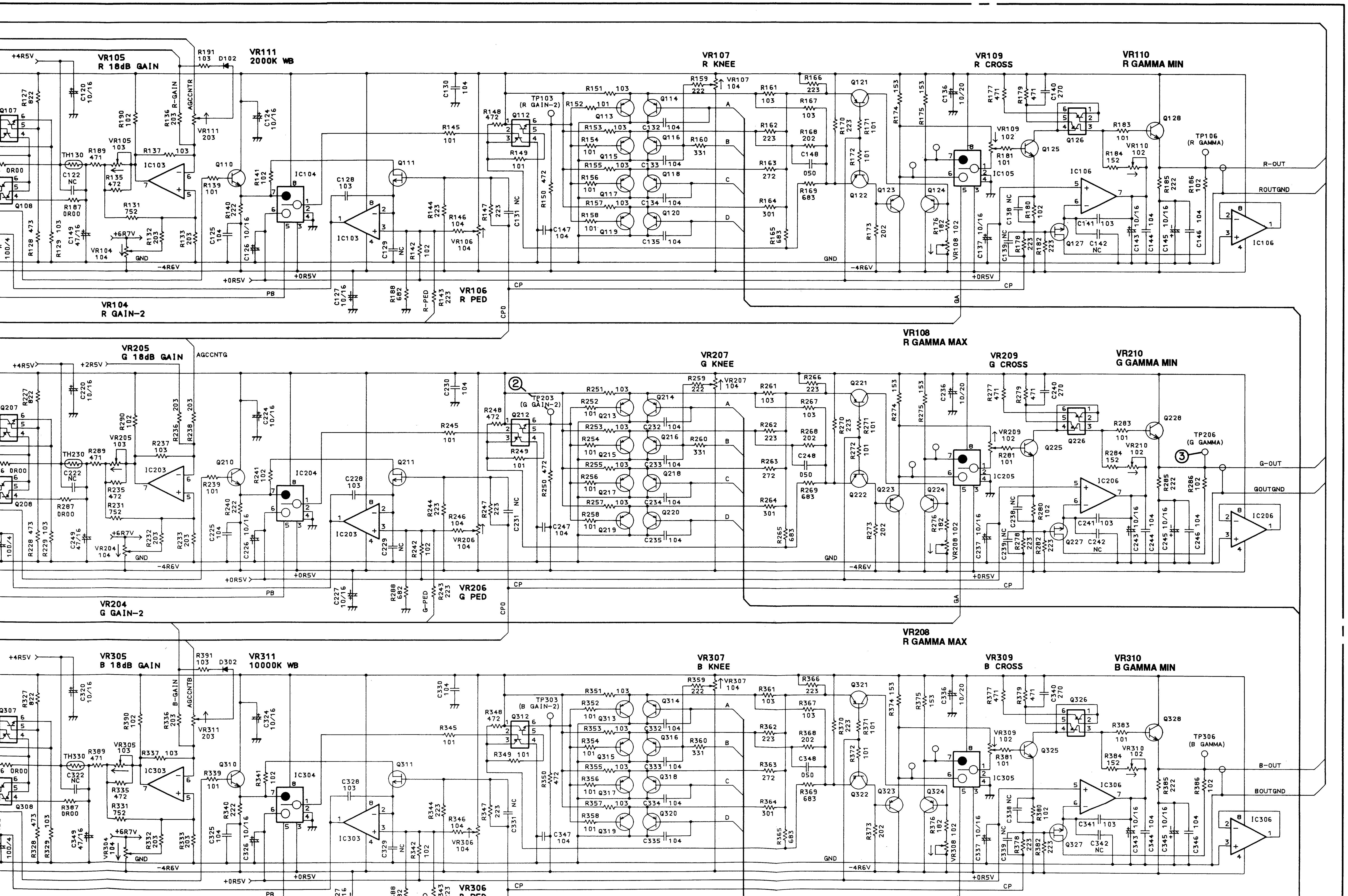
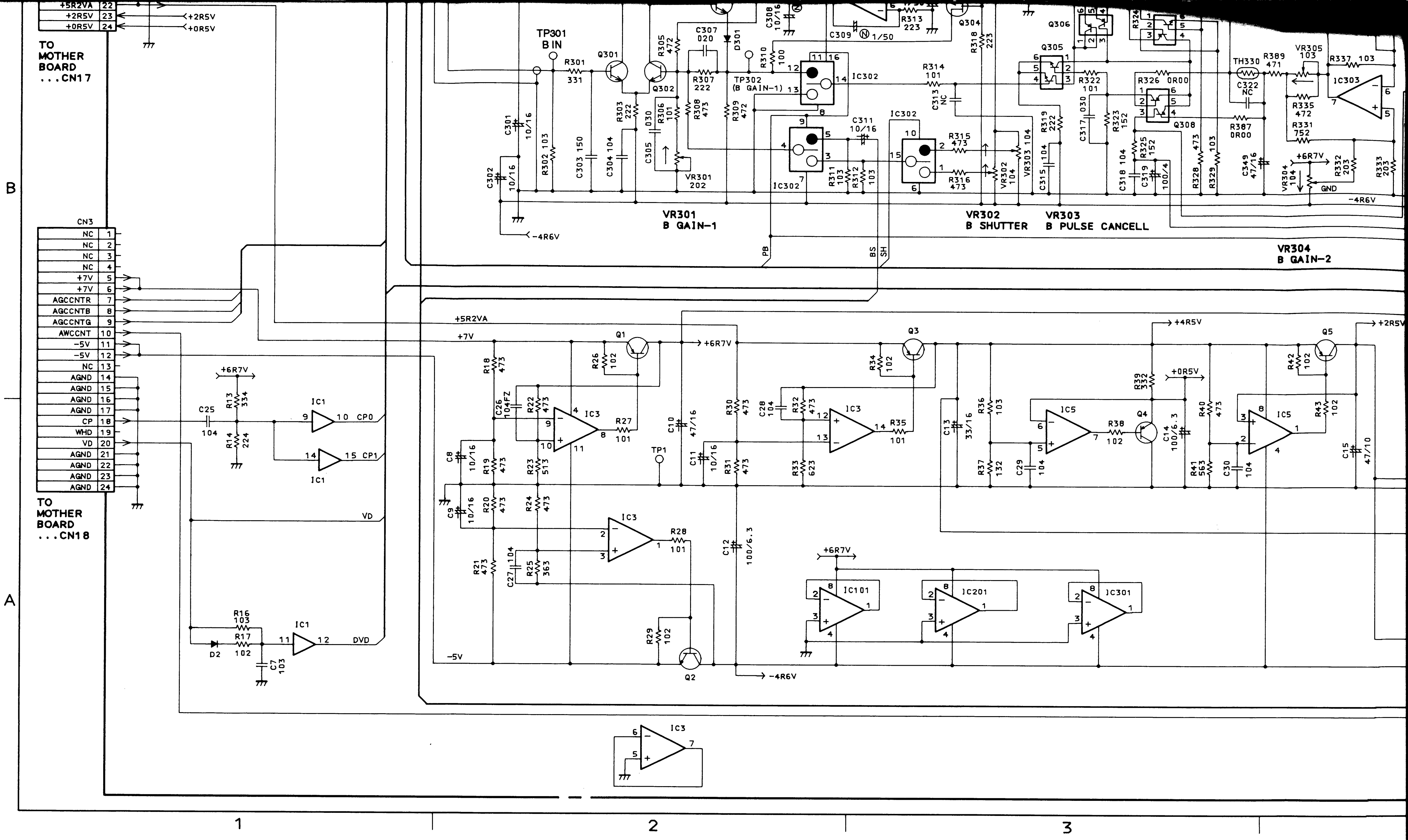
|---|---|
| IC1 | A1, C1, D1 |
| IC3 | A2 |
| IC5 | A3 |
| IC6 | A5 |
| IC7 | A6 |
| IC8 | A7 |
| IC101 | A3 |
| IC102 | D2, D3 |
| IC103 | D4 |
| IC104 | D4 |
| IC105 | D6 |
| IC106 | D7 |
| IC201 | A3, C3 |
| IC202 | C2, C3 |
| IC203 | C4 |
| IC204 | C4 |
| IC205 | C6 |
| IC206 | C7 |
| IC301 | A3, B3 |
| IC302 | B2, B3 |
| IC303 | B4 |
| IC304 | B4 |
| IC305 | B6 |
| IC306 | B7 |
| Q1 | B2 |
| Q2 | A2 |
| Q3 | B3 |
| Q4 | A3 |
| Q5 | B4 |
| Q6 | B4 |
| Q7 | A4 |
| Q8 | A4 |
| Q9 | B4 |
| Q10 | A4 |
| Q11 | A4 |
| Q12 | A4 |
| Q13 | A4 |
| Q14 | A5 |
| Q15 | A5 |
| Q16 | A5 |
| Q17 | A6 |
| Q18 | A6 |
| Q19 | A6 |
| Q101 | D2 |
| Q102 | D2 |
| Q103 | D2 |
| Q104 | D3 |
| Q105 | D3 |
| Q106 | D3 |
| Q201 | C2 |
| Q202 | C2 |
| Q203 | C2 |
| Q204 | C3 |
| Q205 | C3 |
| Q206 | C3 |
| Q207 | C3 |
| Q208 | C3 |
| Q210 | C4 |
| Q211 | C4 |
| Q212 | C5 |
| Q213 | C5 |
| Q214 | C5 |
| Q215 | C5 |
| Q216 | C5 |
| Q217 | C5 |
| Q218 | C5 |
| Q219 | C5 |
| Q220 | C5 |
| Q221 | C6 |
| Q222 | C6 |
| Q223 | C6 |
| Q224 | C6 |
| Q225 | C6 |
| Q226 | C6 |
| Q227 | C6 |
| Q228 | C7 |
| Q301 | B2 |
| Q302 | B2 |
| Q303 | B2 |
| Q304 | B3 |
| Q305 | B3 |
| Q306 | B3 |
| Q307 | B3 |
| Q308 | B3 |
| Q310 | B4 |
| Q311 | B4 |
| Q312 | B5 |
| Q313 | B5 |
| Q314 | B5 |
| Q315 | B5 |
| Q316 | B5 |
| Q317 | B5 |
| Q318 | B5 |
| Q319 | B5 |
| Q320 | B5 |
| Q321 | B6 |
| Q322 | B6 |
| Q323 | B6 |

# M OF PREPROCESS BOARD (WV-E550E)


VR105
R 18dB GAIN
VR111
2000K WB
VR107
R KNEE
VR109
R CROSS
VR110
R GAMMA MIN
TP103
(R GAIN-2)
TP106
(R GAMMA)
IC103
IC104
IC105
IC106
R-OUT
ROUTGND
VR106
R PED
VR104
R GAIN-2
VR108
R GAMMA MAX
VR205
G 18dB GAIN
AGCCNTG
VR207
G KNEE
VR209
G CROSS
VR210
G GAMMA MIN
TP203
(G GAIN-2)
TP206
(G GAMMA)
②
③
IC203
IC204
IC205
IC206
G-OUT
GOUTGND
VR206
G PED
VR204
G GAIN-2
VR208
R GAMMA MAX
VR305
B 18dB GAIN
VR311
10000K WB
VR307
B KNEE
VR309
B CROSS
VR310
B GAMMA MIN
TP303
(B GAIN-2)
TP306
(B GAMMA)
IC303
IC304
IC305
IC306
B-OUT
BOUTGND
VR306
+4R5V
+2R5V
+6R7V
-4R6V
+0R5V
GND
PB
CP
CPD
GA
R-GAIN
AGCCNTR
B-GAIN
AGCCNTB
R-PED
G-PED

| | | | |
|---|---|---|---|
| Q6 | B4 | Q303 | B2 |
| Q7 | A4 | Q304 | B3 |
| Q8 | A4 | Q305 | B3 |
| Q9 | B4 | Q306 | B3 |
| Q10 | A4 | Q307 | B3 |
| Q11 | A4 | Q308 | B3 |
| Q12 | A4 | Q310 | B4 |
| Q13 | A4 | Q311 | B4 |
| Q14 | A5 | Q312 | B5 |
| Q15 | A5 | Q313 | B5 |
| Q16 | A5 | Q314 | B5 |
| Q17 | A6 | Q315 | B5 |
| Q18 | A6 | Q316 | B5 |
| Q19 | A6 | Q317 | B5 |
| Q101 | D2 | Q318 | B5 |
| Q102 | D2 | Q319 | B5 |
| Q103 | D2 | Q320 | B5 |
| Q104 | D3 | Q321 | B6 |
| Q105 | D3 | Q322 | B6 |
| Q106 | D3 | Q323 | B6 |
| Q107 | D3 | Q324 | B6 |
| Q108 | D3 | Q325 | B6 |
| Q110 | D4 | Q326 | B6 |
| Q111 | D4 | Q327 | B6 |
| Q112 | D5 | Q328 | B7 |
| Q113 | D5 | D2 | A1 |
| Q114 | D5 | D101 | D2 |
| Q115 | D5 | D102 | D4 |
| Q116 | D5 | D201 | C2 |
| Q117 | D5 | D301 | B2 |
| Q118 | D5 | D302 | C4 |
| Q119 | D5 | | |
| Q120 | D5 | | |
| Q121 | D6 | | |
| Q122 | D6 | | |
| Q123 | D6 | | |
| Q124 | D6 | | |
| Q125 | D6 | | |
| Q126 | D6 | | |
| Q127 | D6 | | |
| Q128 | D7 | | |


+5R2VA 22
+2R5V 23
+0R5V 24
+2R5V
+0R5V
TO MOTHER BOARD ...CN17
CN3
NC 1
NC 2
NC 3
NC 4
+7V 5
+7V 6
AGCCNTR 7
AGCCNTB 8
AGCCNTG 9
AWCCNT 10
-5V 11
-5V 12
NC 13
AGND 14
AGND 15
AGND 16
AGND 17
CP 18
WHD 19
VD 20
AGND 21
AGND 22
AGND 23
AGND 24
TO MOTHER BOARD ...CN18
B
A
TP301 B IN
R301 331
Q301
Q302
Q303
Q304
Q305
Q306
Q308
IC302
IC303
TP302 (B GAIN-1)
VR301 202
VR301 B GAIN-1
VR302 B SHUTTER
VR303 B PULSE CANCELL
VR304 B GAIN-2
TH330
-4R6V
PB
BS
SH
GND
+6R7V
C25 104
R13 334
R14 224
IC1
CP0
CP1
VD
R16 103
R17 102
D2
C7 103
DVD
+5R2VA
+7V
Q1
Q2
Q3
Q4
Q5
IC3
IC5
TP1
+4R5V
+2R5V
+0R5V
-5V
-4R6V
IC101
IC201
IC301
1
2
3

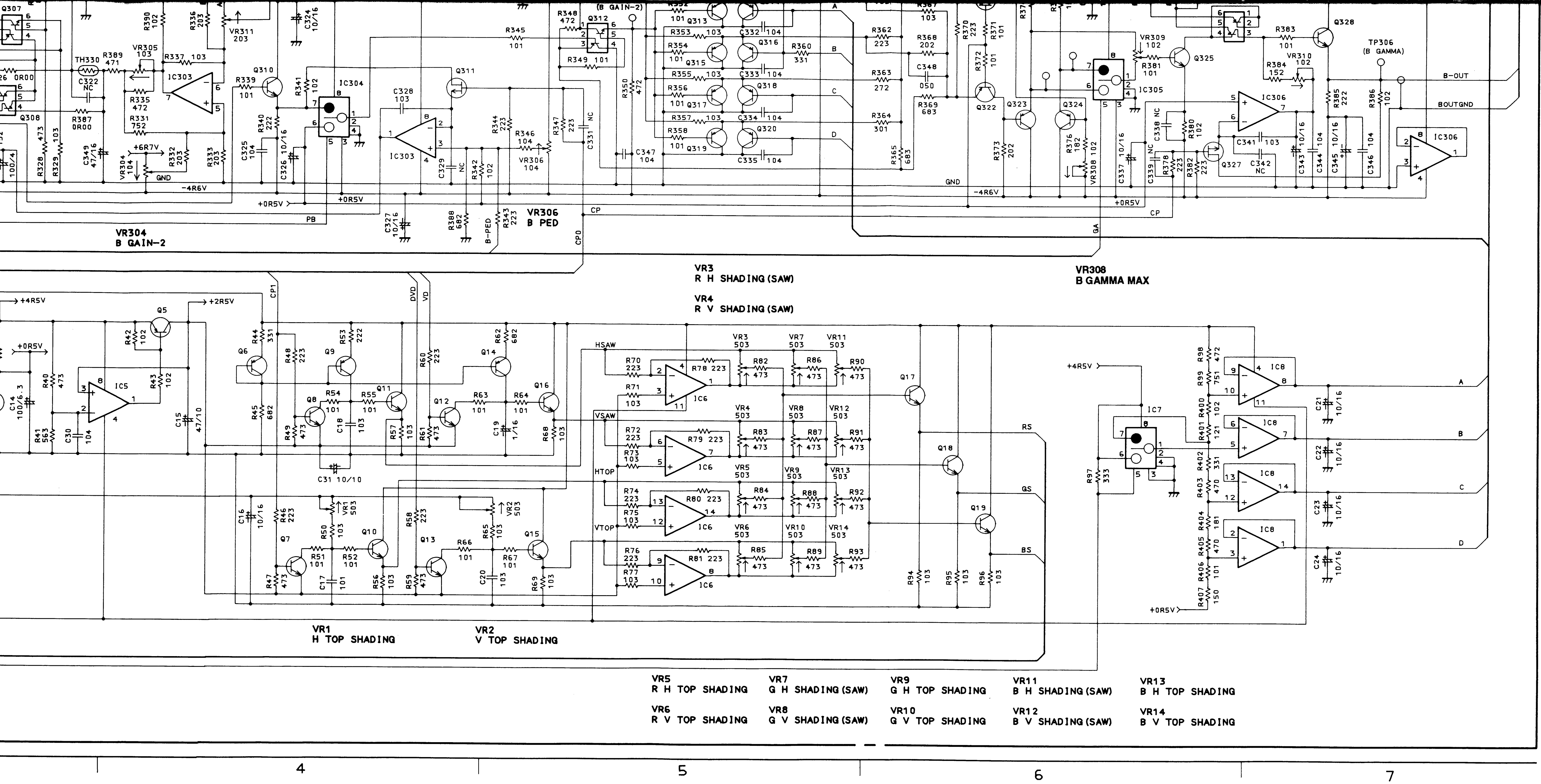
| | B | C | E |
|---|---|---|---|
| Q1 | 6.3 | 6.7 | 7.0 |
| 2 | -4.5 | -4.5 | -5.2 |
| 3 | 4.5 | 4.5 | 5.2 |
| 4 | -0.2 | 0 | 0.5 |
| 5 | 3.9 | 2.5 | 4.6 |
| 6 | 5.8 | 5.8 | 6.5 |
| 7 | 1.0 | 4.1 | 2.5 |
| 8 | 1.0 | 3.1 | 2.5 |
| 9 | 5.8 | 3.2 | 6.4 |
| 10 | 4.1 | 6.7 | 3.8 |
| 11 | 3.2 | 6.7 | 2.6 |
| 12 | 0.9 | 0 | 2.5 |
| 13 | 0.9 | 4.3 | 2.5 |
| 14 | 5.9 | 0 | 6.4 |
| 15 | 4.8 | 0 | 3.8 |
| 16 | 2.9 | -0.2 | 2.3 |
| 17 | 2.5 | 6.7 | 1.9 |
| 18 | 2.5 | 6.7 | 1.9 |
| 19 | 2.3 | 6.7 | 6.7 |
| 101 | 0 | 6.7 | -0.7 |
| 102 | 0 | 1.3 | -0.7 |
| 103 | 1.3 | 6.7 | 0.6 |
| 104 | 0 | -2.2 | 0 |
| 110 | 1.9 | 6.7 | 1.1 |
| 111 | 0.6 | -2.2 | 0.7 |
| 113 | 0 | 0 | 1.3 |
| 114 | 2.1 | 0 | 1.3 |
| 115 | 0.6 | 0 | 1.3 |
| 116 | 1.1 | 0 | 1.3 |
| 117 | 0.6 | 0 | 1.3 |
| 118 | 0.8 | 0 | 1.3 |
| 119 | 0.6 | 0 | 1.3 |
| 120 | 0.6 | 0 | 1.3 |
| 121 | 0.5 | -3.6 | 1.2 |
| 122 | 0.5 | -4.0 | 1.2 |
| 123 | -3.5 | -4.6 | -2.9 |
| 124 | -3.6 | -4.6 | -2.9 |
| 125 | -2.9 | 5.6 | -3.8 |
| 127 | 0.5 | -2.2 | 1.1 |
| 128 | 2.3 | 6.7 | 1.5 |

| | B | C | E |
|---|---|---|---|
| Q201 | 0 | 6.7 | -0.6 |
| 202 | 0.1 | 1.3 | -0.6 |
| 203 | 1.3 | 6.7 | 0.6 |
| 204 | 0 | -2.2 | 0 |
| 210 | 2.1 | 6.7 | 1.3 |
| 211 | 0.6 | -2.2 | 0.8 |
| 213 | 0.6 | 0 | 1.3 |
| 214 | 2.1 | 0 | 1.3 |
| 215 | 0.6 | 0 | 1.3 |
| 216 | 1.2 | 0 | 1.3 |
| 217 | 0.6 | 0 | 1.3 |
| 218 | 0.8 | 0 | 1.3 |
| 219 | 0.6 | 0 | 1.3 |
| 220 | 0.6 | 0 | 1.3 |
| 221 | 0.5 | -3.2 | 1.2 |
| 222 | 0.5 | -4.0 | 1.2 |
| 223 | -3.5 | -4.6 | -2.8 |
| 224 | -3.2 | -4.6 | -2.5 |
| 225 | -2.9 | 5.6 | -3.6 |
| 227 | 0.5 | 2.2 | 1.3 |
| 228 | 2.4 | 6.7 | 1.6 |
| 301 | 0 | 6.7 | -0.7 |
| 302 | 0 | 1.4 | -0.7 |
| 303 | 1.3 | 6.7 | 0.6 |
| 304 | 0 | -2.2 | 0 |
| 310 | 2.0 | 6.7 | 1.3 |
| 311 | 0.6 | -2.2 | 1.1 |
| 313 | 0.7 | 0 | 1.4 |
| 314 | 2.1 | 0 | 1.4 |
| 315 | 0.7 | 0 | 1.4 |
| 316 | 1.2 | 0 | 1.4 |
| 317 | 0.7 | 0 | 1.4 |
| 318 | 0.8 | 0 | 1.4 |
| 319 | 0.7 | 0 | 1.4 |
| 320 | 0.6 | 0 | 1.4 |
| 321 | 0.5 | -3.2 | 1.2 |
| 322 | 0.5 | -3.5 | 1.2. |
| 323 | -3.5 | -4.6 | -2.8 |
| 324 | -3.2 | -4.6 | -2.5 |
| 325 | -2.9 | 5.6 | -3.6 |
| 327 | 0.5 | -2.2 | 1.6 |
| 328 | 2.4 | 6.7 | 1.7 |

## PREPROCESS BOARD

| | IC5 | IC6 | IC7 | IC8 | IC101 | IC201 | IC301 |
|---|---|---|---|---|---|---|---|
| Pin 1 | 3.0 | 2.4 | 1.2 | 0.6 | 5.5 | 5.5 | 5.5 |
| 2 | 2.5 | 0 | 0 | 0.6 | 5.5 | 5.5 | 5.5 |
| 3 | 2.5 | 2.5 | 0 | 0 | 0 | 0.3 | 0 |
| 4 | 0 | 6.7 | 0 | 0 | -4.6 | -4.6 | -4.6 |
| 5 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 2.5 | 4.6 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 1.2 | 0 | 0.4 | 0.4 | 0.8 |
| 8 | 4.6 | 1.3 | 4.6 | 0 | 6.8 | 6.8 | 6.7 |
| 9 | | 2.5 | | 2.1 | | | |
| 10 | | 2.5 | | 2.1 | | | |
| 11 | | -4.6 | | -4.6 | | | |
| 12 | | 2.5 | | 0.8 | | | |
| 13 | | 2.5 | | 0 | | | |
| 14 | | 1.3 | | 0.8 | | | |

| | Q105 | Q106 | Q107 | Q108 | Q112 | Q126 | Q205 | Q206 | Q207 | Q208 | Q212 | Q226 | Q305 | Q306 | Q307 | Q308 | Q312 | Q326 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 5.2 | 6.0 | 6.8 | 5.2 | 6.7 | 5.4 | 5.2 | 6.0 | 6.7 | 0 | 6.7 | 5.4 | 5.2 | 6.0 | 6.7 | 0.1 | 6.7 | 5.5 |
| 2 | 0 | 6.0 | 5.1 | 5.2 | 0.7 | 5.4 | 0 | 6.0 | 5.2 | 4.6 | 0.8 | 5.4 | 0.1 | 6.0 | 5.2 | 4.6 | 1.1 | 5.5 |
| 3 | 6.0 | 5.2 | 5.7 | 4.5 | 1.3 | 2.3 | 6.0 | 5.2 | 5.8 | 1.6 | 1.4 | 2.4 | 6.0 | 5.2 | 5.7 | 1.9 | 1.7 | 2.4 |
| 4 | 0 | 6.0 | 5.2 | 1.4 | 0 | 5.5 | 0 | 0 | 5.2 | 4.5 | 0 | 5.4 | 0.1 | 6.0 | 5.2 | 4.5 | 0 | 5.5 |
| 5 | -0.7 | 6.7 | 5.7 | 4.6 | 1.3 | 6.2 | -0.7 | 1.8 | 5.7 | 5.2 | 1.4 | 6.2 | -0.6 | 6.7 | 5.7 | 5.2 | 1.7 | 6.2 |
| 6 | -0.7 | 6.7 | 5.1 | 0 | 0.7 | 6.2 | -0.7 | 6.7 | 5.2 | 5.2 | 0.8 | 6.2 | -0.6 | 6.7 | 5.2 | 5.2 | 1.1 | 6.2 |


VR304
B GAIN-2
VR306
B PED
VR308
B GAMMA MAX
TP306
(B GAMMA)
B-OUT
BOUTGND
VR3
R H SHADING (SAW)
VR4
R V SHADING (SAW)
VR1
H TOP SHADING
VR2
V TOP SHADING
VR5
R H TOP SHADING
VR6
R V TOP SHADING
VR7
G H SHADING (SAW)
VR8
G V SHADING (SAW)
VR9
G H TOP SHADING
VR10
G V TOP SHADING
VR11
B H SHADING (SAW)
VR12
B V SHADING (SAW)
VR13
B H TOP SHADING
VR14
B V TOP SHADING
4
5
6
7

**Note: The value indicated in the schematic diagram should be read as follows:**

☐☐☐

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Significant Digit (1 - 9)

**<Example>**

For Resistor:

330 → $33 \times 10^0$ = 33 Ω
561 → $56 \times 10^1$ = 560 Ω
123 → $12 \times 10^3$ = 12k Ω
0R00 = 0 Ω

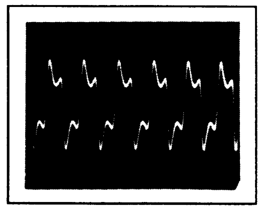
For Capacitor:

820 → $82 \times 10^0$ = 82 pF
102 → $10 \times 10^2$ = 1000 pF = 0.001 µF
104 → $10 \times 10^4$ = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.

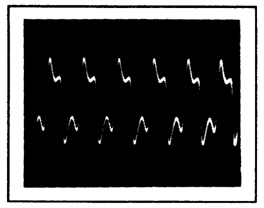
# SCHEMATIC DIAGRAM OF DIGITAL PROC

**DIGITAL PROCESS BOARD**

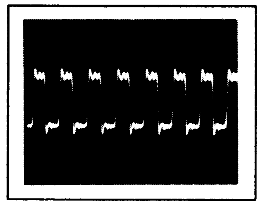
1. 20nsec/DIV 2V/DIV



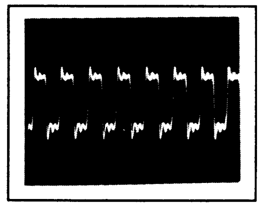
2. 20nsec/DIV 2V/DIV



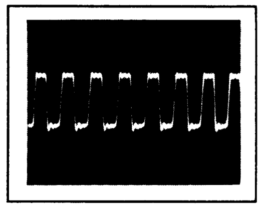
3. 50nsec/DIV 2V/DIV



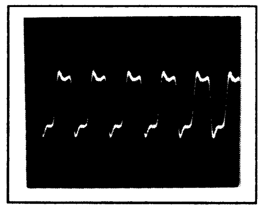
4. 50nsec/DIV 2V/DIV



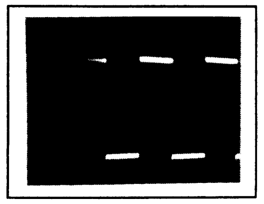
5. 50nsec/DIV 2V/DIV



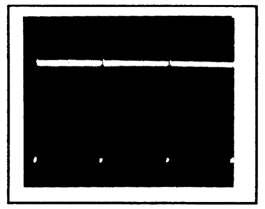
6. 20nsec/DIV 2V/DIV



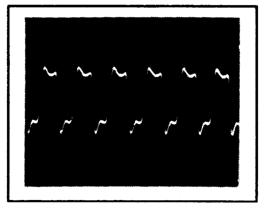
7. 10msec/DIV 1V/DIV



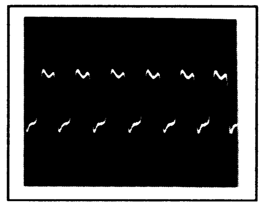
8. 5msec/DIV 1V/DIV



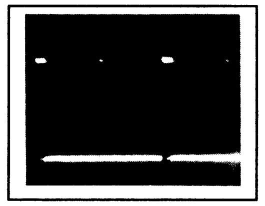
9. 20nsec/DIV 2V/DIV



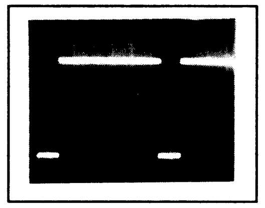
10. 20nsec/DIV 2V/DIV



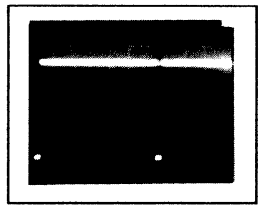
11. 10μsec/DIV 1V/DIV



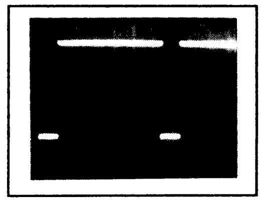
12. 10μsec/DIV 1V/DIV

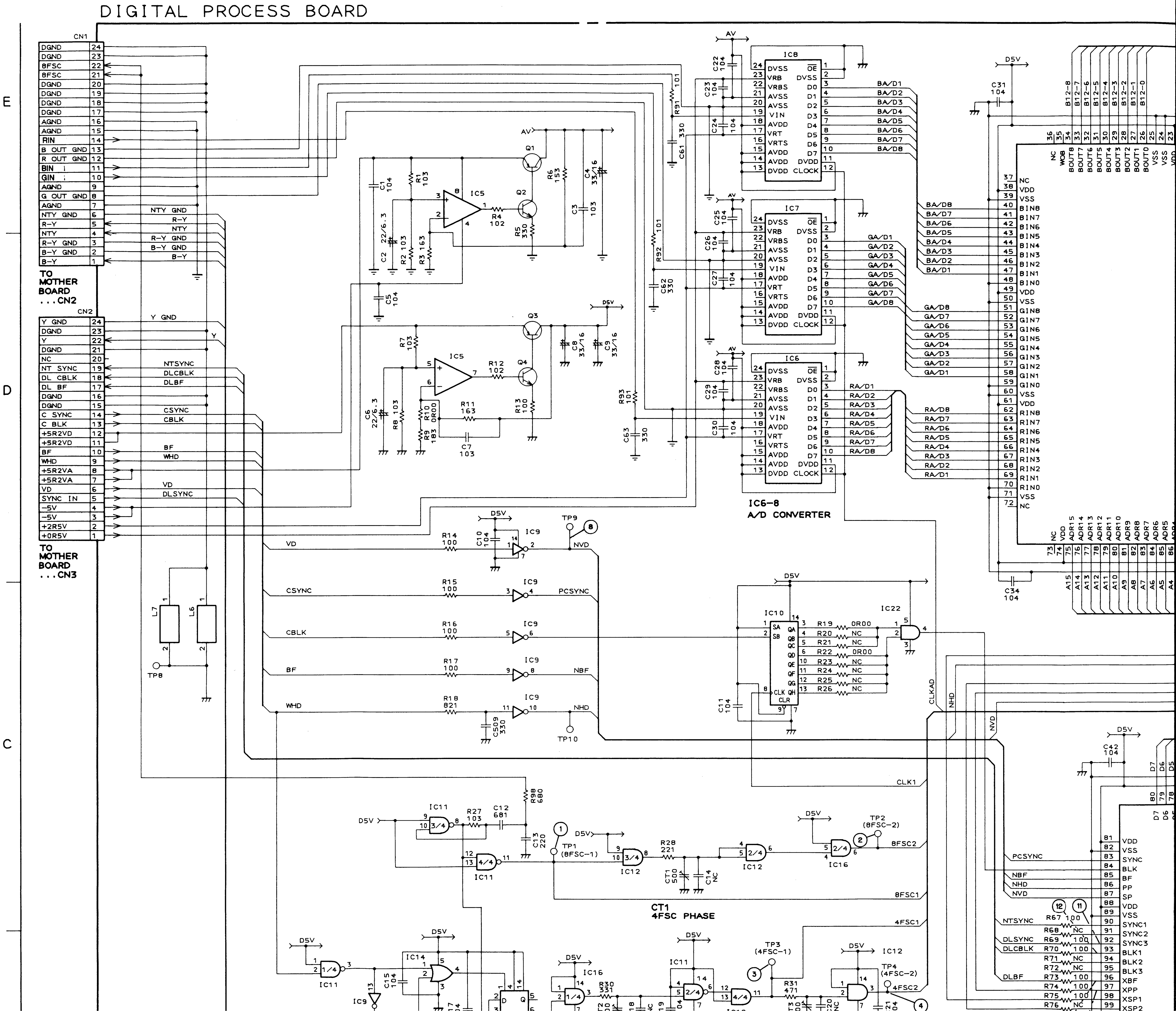


13. 10μsec/DIV 1V/DIV

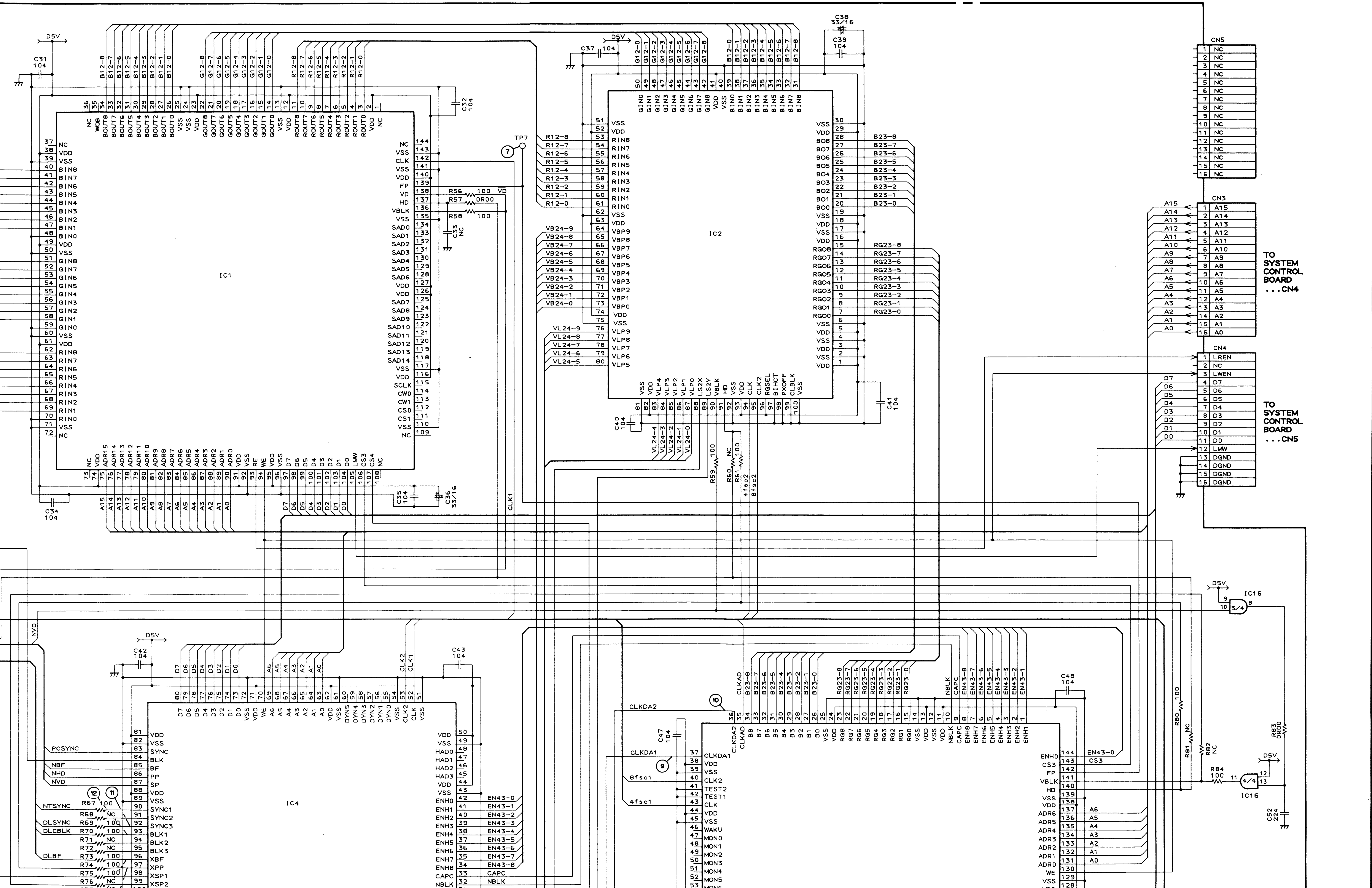


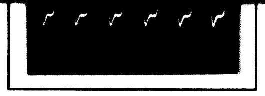
14. 10μsec/DIV 1V/DIV



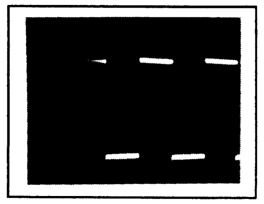


# OF DIGITAL PROCESS BOARD (WV-E550E)

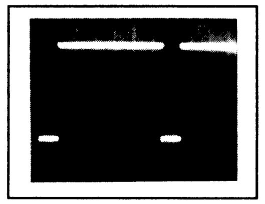

IC1
IC2
IC4
IC16
CN3
CN4
CN5
TO SYSTEM CONTROL BOARD ...CN4
TO SYSTEM CONTROL BOARD ...CN5
D5V
TP7
C31 104
C32 104
C33 NC
C34 104
C35 104
C36 33/16
C37 104
C38 33/16
C39 104
C40 104
C41 104
C42 104
C43 104
C47 104
C48 104
C52 224
R56 100
R57 0R00
R58 100
R59 100
R60 NC
R61 100
R67 100
R68 NC
R69 100
R70 100
R71 NC
R72 NC
R73 100
R74 100
R75 100
R76 NC
R80 100
R81 NC
R82 NC
R83 0R00
R84 100
CLK1
CLK2
CLKDA1
CLKDA2
4fsc1
8fsc1
4fsc2
8fsc2
PCSYNC
NBF
NHD
NVD
NTSYNC
DLSYNC
DLCBLK
DLBF
LREN
LWEN
LMW
DGND
EN43-0
CS3
CAPC
NBLK



7. 10msec/DIV 1V/DIV



14. 10µsec/DIV 1V/DIV

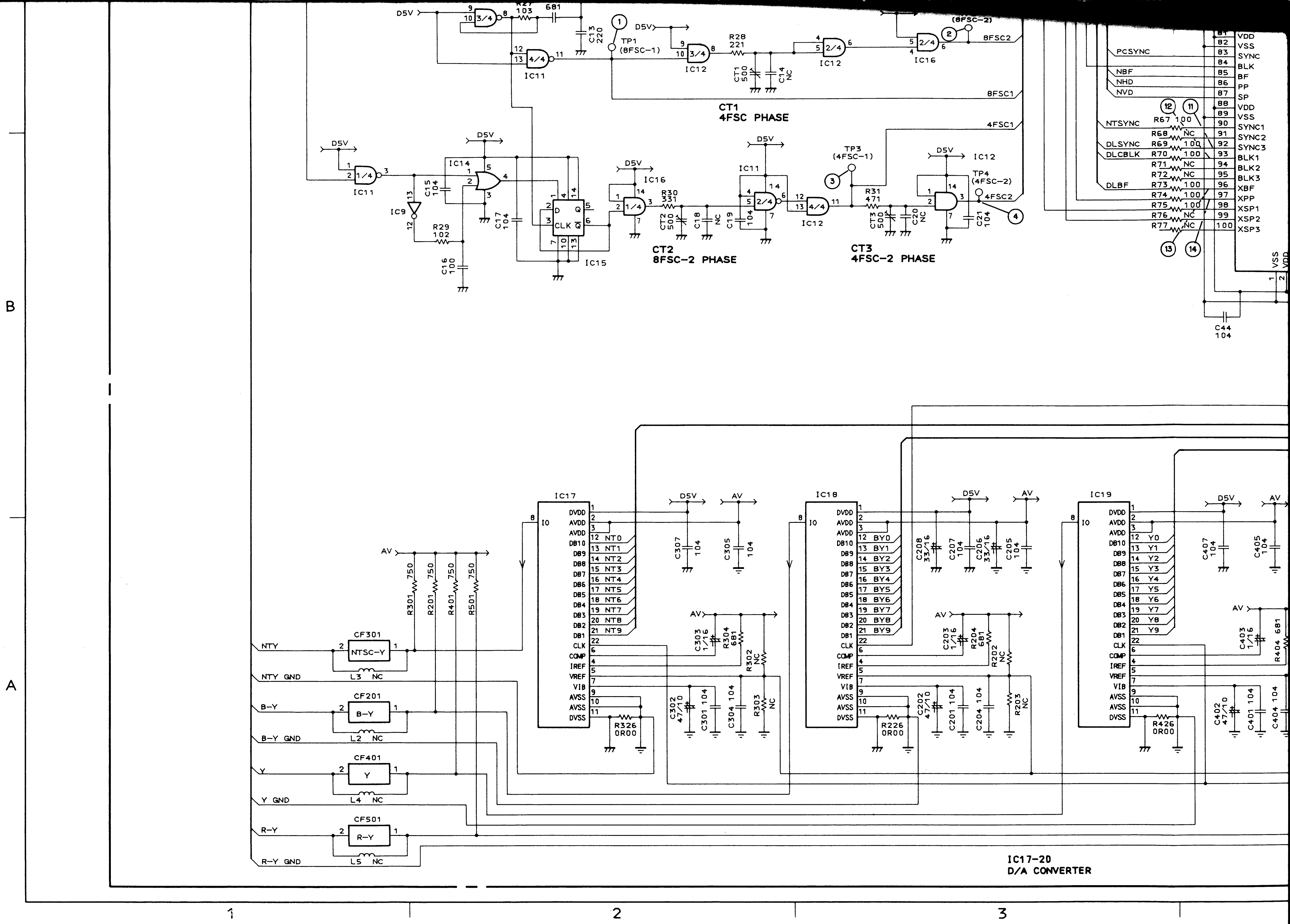


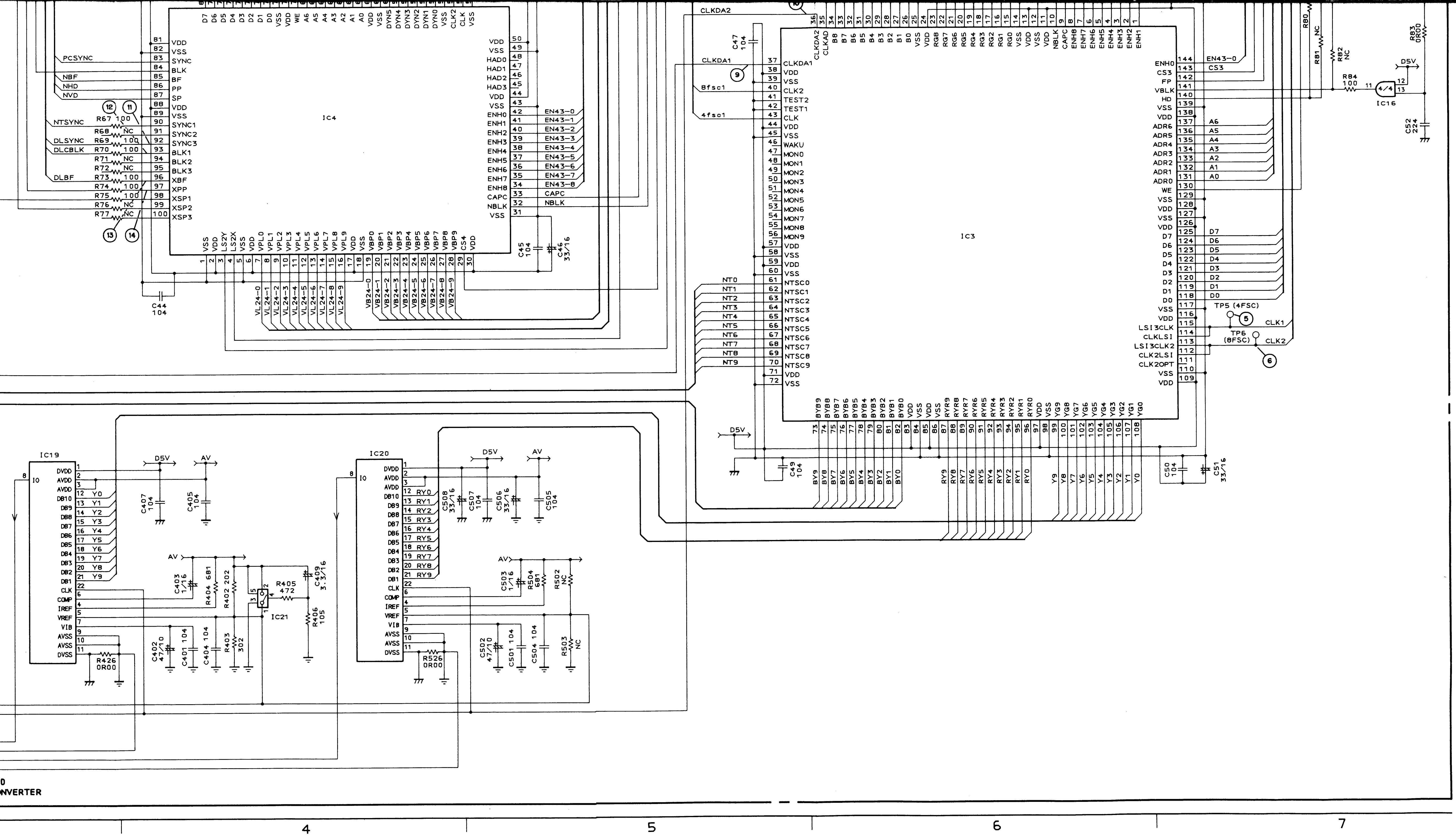
## < Index >
## DIGITAL PROCESS BOARD

| | |
|---|---|
| IC1 | D4 |
| IC2 | D5 |
| IC3 | B6 |
| IC4 | C4 |
| IC5 | D2, E2 |
| IC6 | D3 |
| IC7 | D3 |
| IC8 | E3 |
| IC9 | C2, D2 |
| IC10 | C3 |
| IC11 | B1, B2, C2 |
| IC12 | B3, C2, C3 |
| IC14 | B2 |
| IC15 | B2 |
| IC16 | B2, C3, C7 |
| IC17 | A2 |
| IC18 | A3 |
| IC19 | A3 |
| IC20 | A4 |
| IC21 | A4 |
| IC22 | C3 |
| Q1 | E2 |
| Q2 | E2 |
| Q3 | D2 |
| Q4 | D2 |

### DIGITAL PROCESS BOARD

| | IC10 | IC11 | IC15 | IC16 |
|---|---|---|---|---|
| Pin 1 | 4.9 | 4.9 | 4.9 | 4.9 |
| 2 | 3.8 | 0.8 | 2.4 | 2.4 |
| 3 | 3.8 | 4.2 | 2.3 | 2.4 |
| 4 | 3.8 | 4.9 | 4.9 | 2.2 |
| 5 | 3.8 | 2.4 | 2.4 | 4.9 |
| 6 | 3.8 | 0.2 | 2.4 | 2.2 |
| 7 | 0 | 0 | 0 | 0 |
| 8 | 2.2 | 2.3 | 4.9 | 4.7 |
| 9 | 4.9 | 4.9 | 4.9 | 4.9 |
| 10 | 3.8 | 2.3 | 0 | 0.2 |
| 11 | 3.8 | 2.5 | 0.8 | 0.2 |
| 12 | 3.8 | 2.3 | 0.8 | 0.2 |
| 13 | 3.8 | 4.9 | 0 | 4.7 |
| 14 | 4.9 | 4.9 | 4.9 | 0.2 |


B
A
1
2
3
D5V
IC11
IC12
IC16
TP1 (8FSC-1)
(8FSC-2)
8FSC2
8FSC1
4FSC1
R27 103
681
C13 220
R28 221
CT1 500
C14 NC
CT1
4FSC PHASE
IC14
IC9
IC15
IC16
C15 104
R29 102
C16 100
C17 104
R30 331
CT2 500
C18 NC
C19 104
CT2
8FSC-2 PHASE
TP3 (4FSC-1)
TP4 (4FSC-2)
4FSC2
R31 471
CT3 500
C20 NC
C21 104
CT3
4FSC-2 PHASE
PCSYNC
NBF
NHD
NVD
NTSYNC
DLSYNC
DLCBLK
DLBF
R67 100
R68 NC
R69 100
R70 100
R71 NC
R72 NC
R73 100
R74 100
R75 100
R76 NC
R77 NC
VDD
VSS
SYNC
BLK
BF
PP
SP
SYNC1
SYNC2
SYNC3
BLK1
BLK2
BLK3
XBF
XPP
XSP1
XSP2
XSP3
C44 104
IC17
IC18
IC19
AV
NTY
NTY GND
B-Y
B-Y GND
Y
Y GND
R-Y
R-Y GND
CF301 NTSC-Y
L3 NC
CF201 B-Y
L2 NC
CF401 Y
L4 NC
CF501 R-Y
L5 NC
R301 750
R201 750
R401 750
R501 750
NT0
NT1
NT2
NT3
NT4
NT5
NT6
NT7
NT8
NT9
BY0
BY1
BY2
BY3
BY4
BY5
BY6
BY7
BY8
BY9
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
Y9
DVDD
AVDD
DB10
DB9
DB8
DB7
DB6
DB5
DB4
DB3
DB2
DB1
CLK
COMP
IREF
VREF
VIB
AVSS
DVSS
IO
C307 104
C305 104
C303 1/16
R304 681
R302 NC
C302 47/10
C301 104
C304 104
R303 NC
R326 0R00
C208 33/16
C207 104
C206 33/16
C205 104
C203 1/16
R204 681
R202 NC
C202 47/10
C201 104
C204 104
R203 NC
R226 0R00
C407 104
C405 104
C403 1/16
R404 681
C402 47/10
C401 104
C404 104
R426 0R00
IC17-20
D/A CONVERTER


IC4
IC3
IC16
IC19
IC20
IC21
PCSYNC
NBF
NHD
NVD
NTSYNC
DLSYNC
DLCBLK
DLBF
R67 100
R68 NC
R69 100
R70 100
R71 NC
R72 NC
R73 100
R74 100
R75 100
R76 NC
R77 NC
C44 104
C45 104
C46 33/16
C47 104
C49 104
C50 104
C51 33/16
C52 224
R80 NC
R81
R82 NC
R83 0R00
R84 100
CLKDA1
CLKDA2
8fsc1
4fsc1
EN43-0
EN43-1
EN43-2
EN43-3
EN43-4
EN43-5
EN43-6
EN43-7
EN43-8
CAPC
NBLK
CS3
A0
A1
A2
A3
A4
A5
A6
D0
D1
D2
D3
D4
D5
D6
D7
TP5 (4FSC)
TP6 (8FSC)
CLK1
CLK2
NT0
NT1
NT2
NT3
NT4
NT5
NT6
NT7
NT8
NT9
D5V
AV
C401 104
C402 47/10
C403 1/16
C404 104
C405 104
C407 104
C409 3.3/16
R402 202
R403 302
R404 681
R405 472
R406 105
R426 0R00
C501 104
C502 47/10
C503 1/16
C504 104
C505 104
C506 33/16
C507 104
C508 33/16
R502 NC
R503 NC
R504 681
R526 0R00
NVERTER
4
5
6
7

**Note: The value indicated in the schematic diagram should be read as follows:**

☐☐☐

- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Significant Digit (1 - 9)

**<Example>**

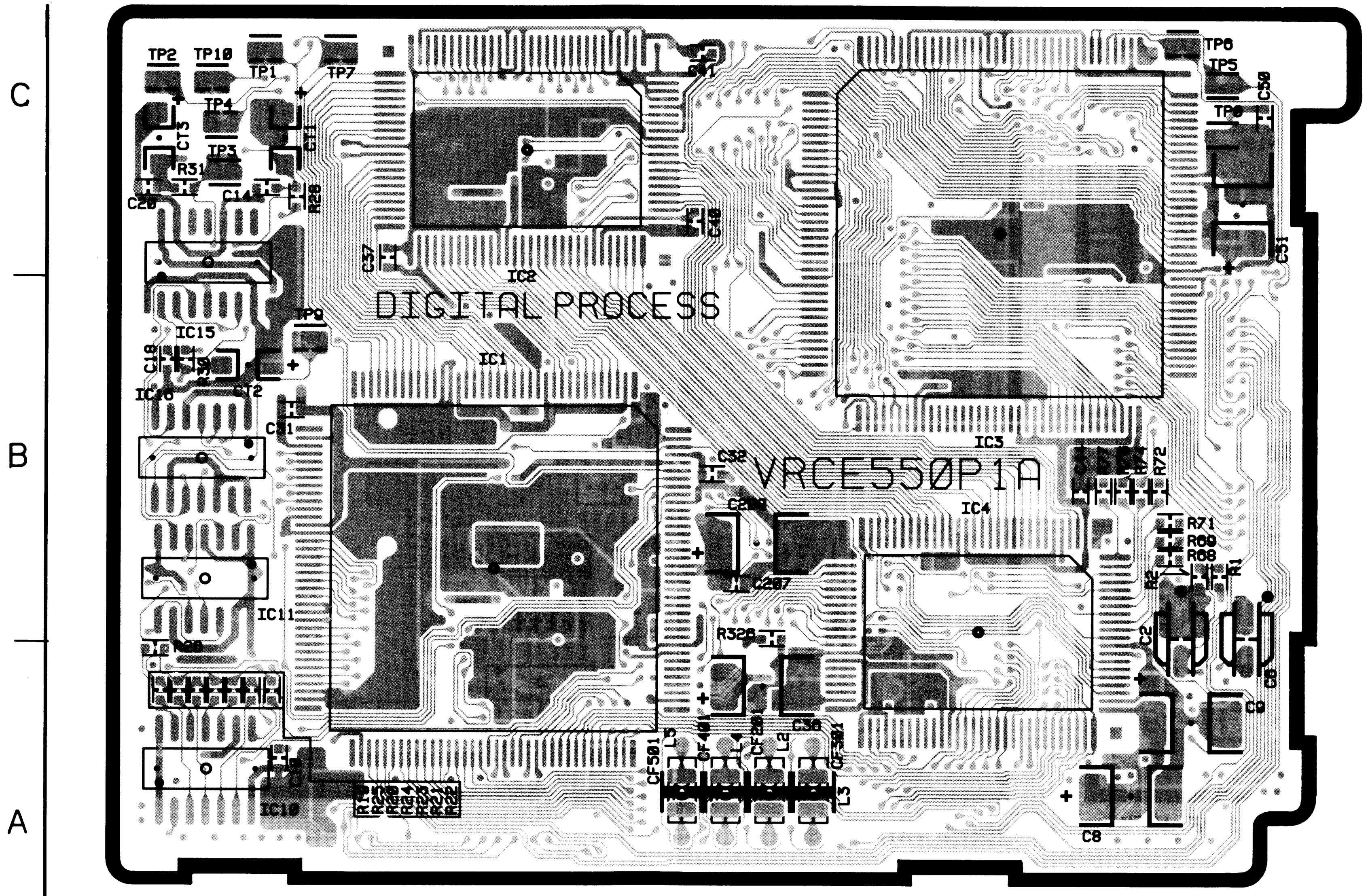
| For Resistor: | For Capacitor: |
|---|---|
| 330 ⟶ 33 x $10^0$ = 33 Ω | 820 ⟶ 82 x $10^0$ = 82 pF |
| 561 ⟶ 56 x $10^1$ = 560 Ω | 102 ⟶ 10 x $10^2$ = 1000 pF = 0.001 µF |
| 123 ⟶ 12 x $10^3$ = 12k Ω | 104 ⟶ 10 x $10^4$ = 100000 pF = 0.1 µF |
| 0R00 = 0 Ω | The suffix attached to capacitance indicates a type of capacitor. |

# CONDUCTOR VIEW OF DIGITAL PROCESS BOARD (WV-E550E)

**< Index>**
**DIGITAL PROCESS BOARD**

| | |
|---|---|
| IC1 | B2 |
| IC2 | C2 |
| IC3 | C3 |
| IC4 | B3 |
| IC5 | A5 |
| IC6 | A7 |
| IC7 | B7 |
| IC8 | C7 |
| IC9 | A7 |
| IC10 | A1 |
| IC11 | B1 |
| IC12 | C8 |
| IC14 | B8 |
| IC15 | C1 |
| IC16 | B1 |
| IC17 | B6 |
| IC18 | B6 |
| IC19 | C5 |
| IC20 | C6 |
| IC21 | C5 |
| IC22 | B7 |
| Q1 | B5 |
| Q2 | B5 |
| Q3 | A5 |
| Q4 | A5 |

DIGITAL PROCESS BOARD

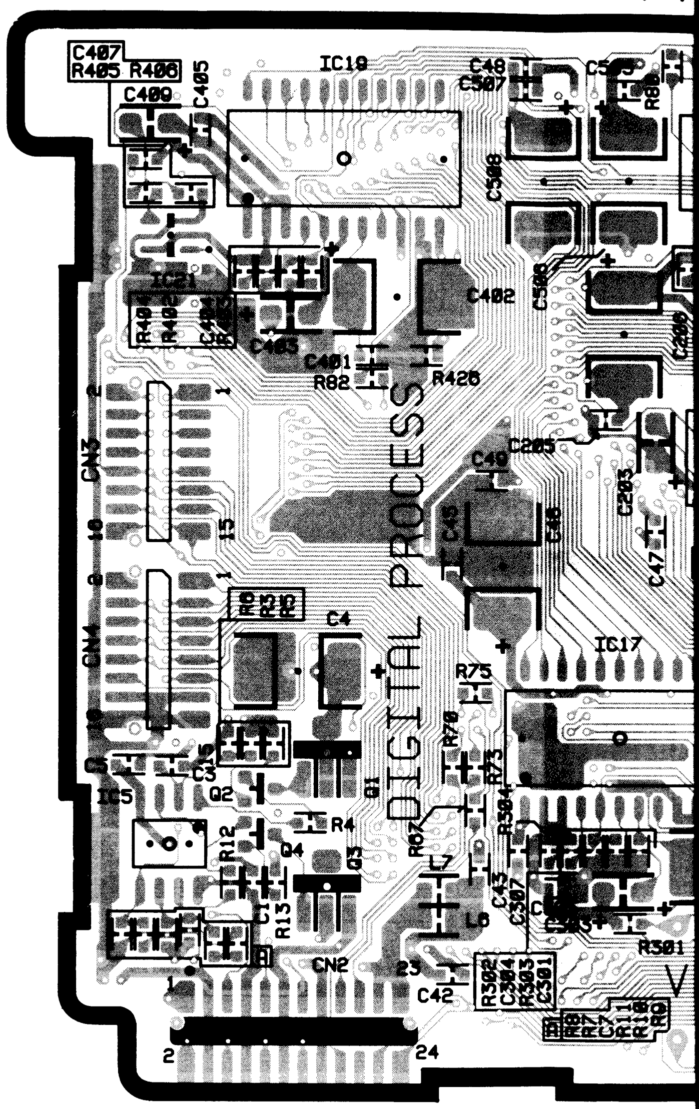

C
B
A
TP2
TP10
TP1
TP7
TP4
TP3
TP6
TP5
TP8
TP9
IC1
IC2
IC3
IC4
IC10
IC11
IC15
IC16
DIGITAL PROCESS
VRCE550P1A
C8
C9
CF501
CF401
CF301
L1
L2
L3
L5
C30
C32
C207
C208
R326
R71
R69
R68
R72

▨ COMPONENT SIDE

INTERMEDIATE PATTERN

*(COMPONENT SIDE VIEW)*

DIGITAL PROCESS BOAR


IC19
IC17
IC5
CN2
CN3
CN4
Q1
Q2
Q3
Q4
C402
C401
C403
R426
L6
L7
DIGITAL PROCESS
2
24
23

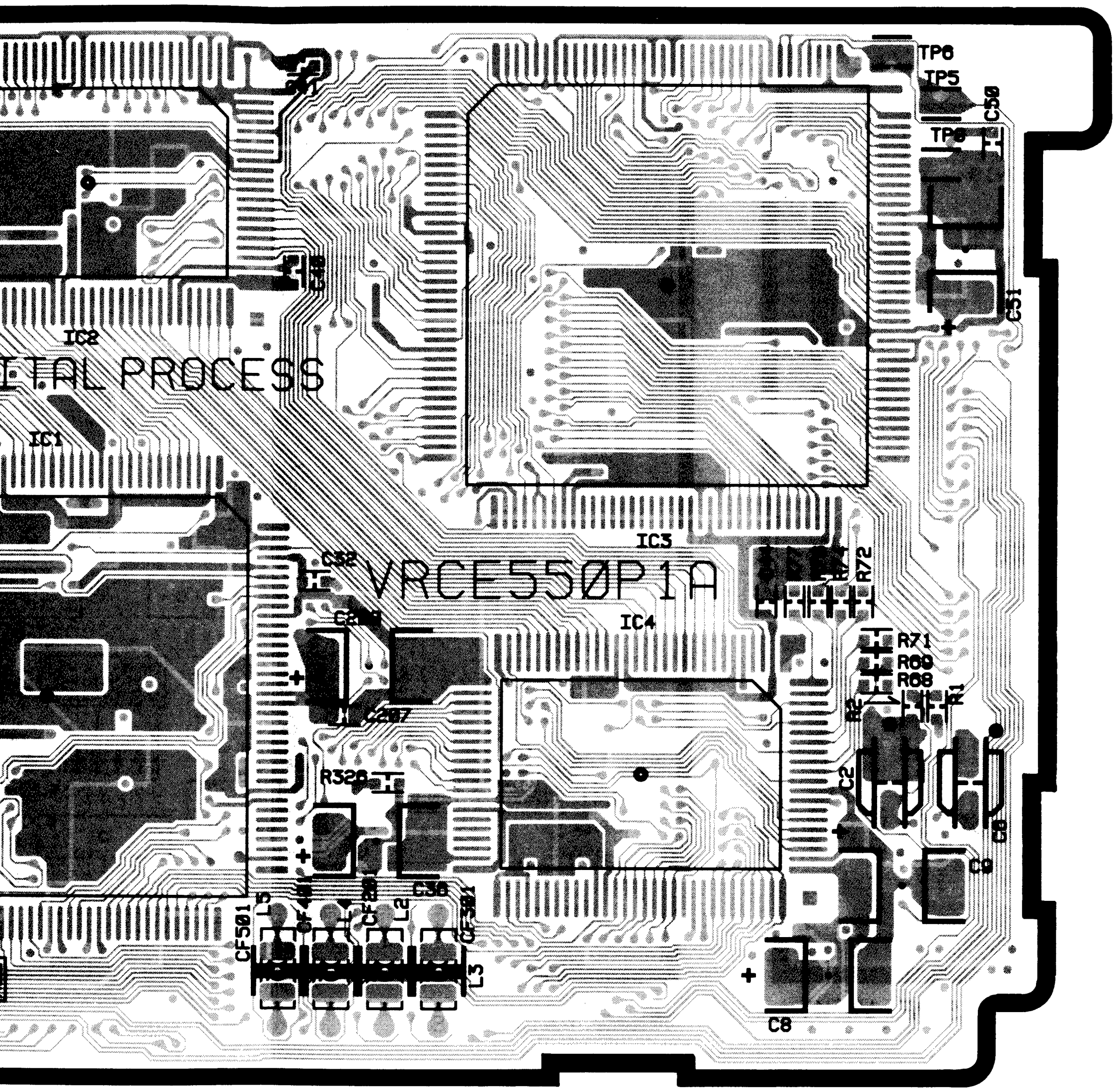
▨ PATTERN SIDE

INTERMEDIATE PATTERN

1 2 3 4 5

# CONDUCTOR VIEW OF DIGITAL PROCESS BOARD (WV-E550E)

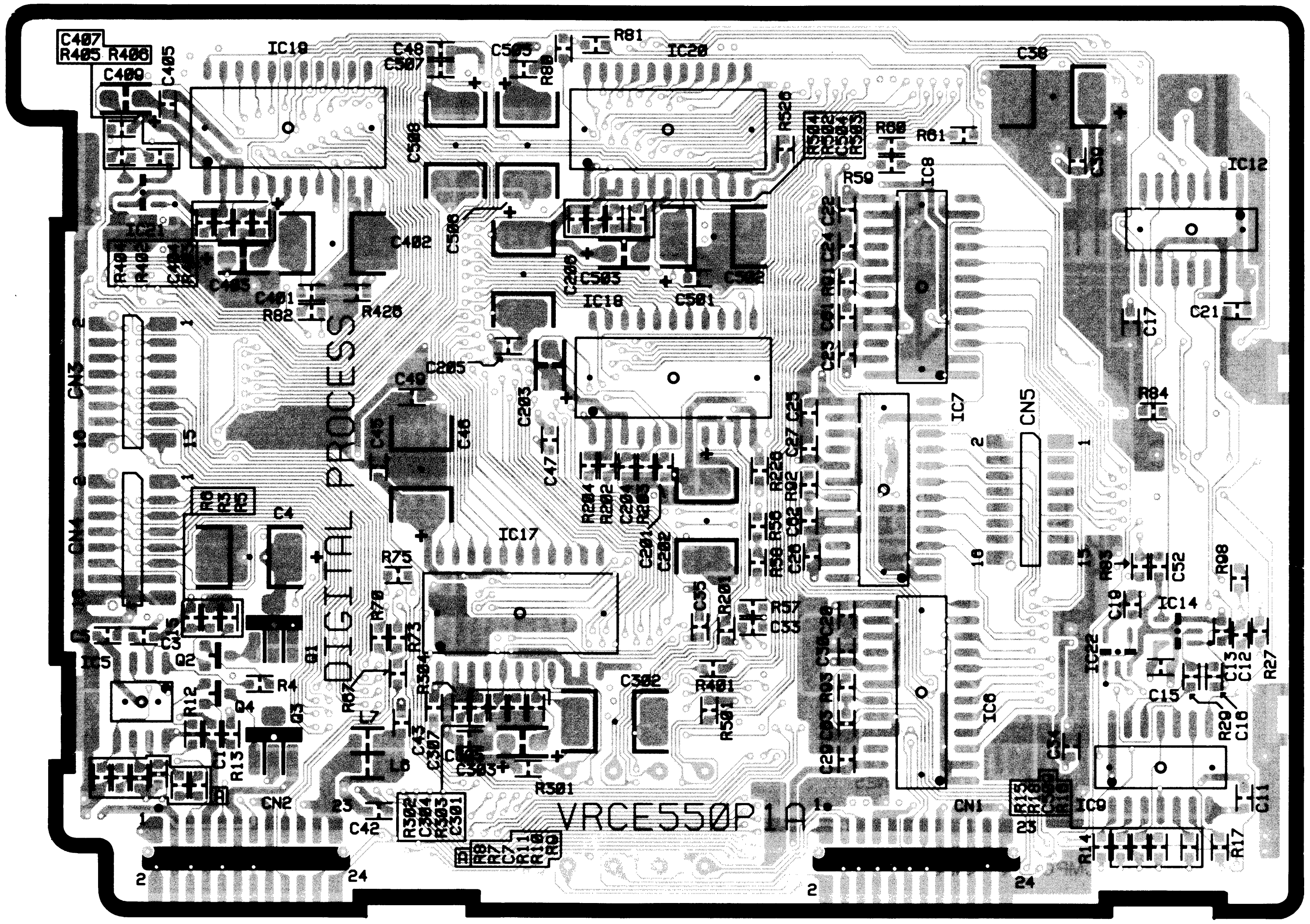
## ESS BOARD


TP6
TP5
TP8
C50
C51
IC2
IC1
IC3
IC4
VRCE550P1A
C32
C207
R320
R72
R71
R69
R68
C2
C8
C9
C30
CF501
L3

(COMPONENT SIDE VIEW)

ERN

## DIGITAL PROCESS BOARD


C407
R405
R406
C400
C405
IC19
C48
C507
C505
R81
IC20
C38
IC12
IC8
R59
R60
R61
C402
C401
R82
R420
IC18
C501
C503
C205
C203
C49
C46
C47
CN3
CN4
CN5
IC7
IC17
C4
R75
R73
Q1
Q2
Q3
Q4
R4
R12
R13
IC5
IC6
IC14
IC22
C52
C15
C13
C12
R27
R29
C10
C11
R17
R14
IC9
CN1
CN2
C42
L6
C302
R401
R301
R57
C53
R84
C17
C21
VRCE550P1A
DIGITAL PROCESS

(PATTERN SIDE VIEW)

▨ PATTERN SIDE

INTERMEDIATE PATTERN

2 3 4 5 6 7

# CONDUCTOR VIEW OF MOTHER BOARD (WV-E550E)

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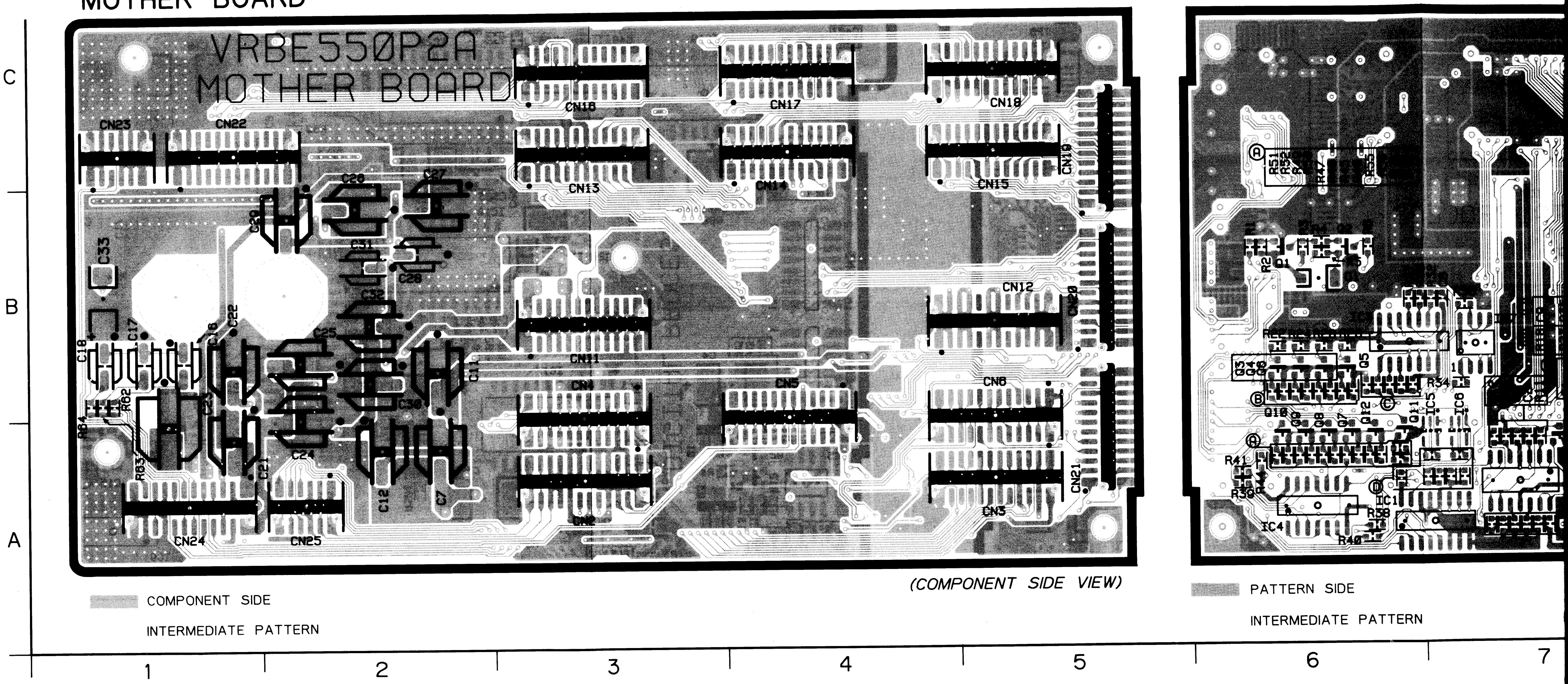
**MOTHER BOARD**

| | |
|---|---|
| IC1 | A6 |
| IC2 | A7 |
| IC3 | B6 |
| IC4 | A6 |
| IC5 | A7 |
| IC6 | A7 |
| IC7 | B7 |
| IC8 | B9 |
| IC9 | A9 |
| IC10 | A9 |
| IC11 | A9 |
| Q1 | B6 |
| Q2 | B6 |
| Q3 | B6 |
| Q4 | B6 |
| Q5 | B6 |
| Q6 | B6 |
| Q7 | A6 |
| Q8 | A6 |
| Q9 | A6 |
| Q10 | A6 |
| Q11 | A6 |
| Q12 | A6 |
| Q16 | A10 |
| Q17 | A10 |
| Q18 | B10 |
| Q19 | B10 |
| Q20 | B9 |
| Q21 | B9 |
| Q22 | B9 |
| Q23 | B8 |
| Q24 | B9 |
| Q25 | B9 |
| Q26 | B8 |
| Q27 | B8 |
| Q28 | B9 |
| Q29 | B9 |
| D1 | B6 |
| D2 | A7 |
| D6 | B10 |

MOTHER BOARD

MOTHER BOARD


C
B
A
1
2
3
4
5
6
7
VRBE550P2A
MOTHER BOARD
CN23
CN22
CN16
CN17
CN18
CN13
CN14
CN15
CN19
CN12
CN20
CN11
CN4
CN5
CN6
CN21
CN3
CN2
CN24
CN25
C26
C27
C29
C31
C28
C33
C32
C25
C22
C16
C17
C18
C11
C30
C24
C21
C12
C7
R62
R64
R63
R51
R52
R47
R2
Q1
Q3
Q4
Q6
Q5
R34
IC5
IC8
Q10
Q9
Q8
Q7
Q12
Q11
R41
R44
R39
IC1
R58
IC4
R40

(COMPONENT SIDE VIEW)

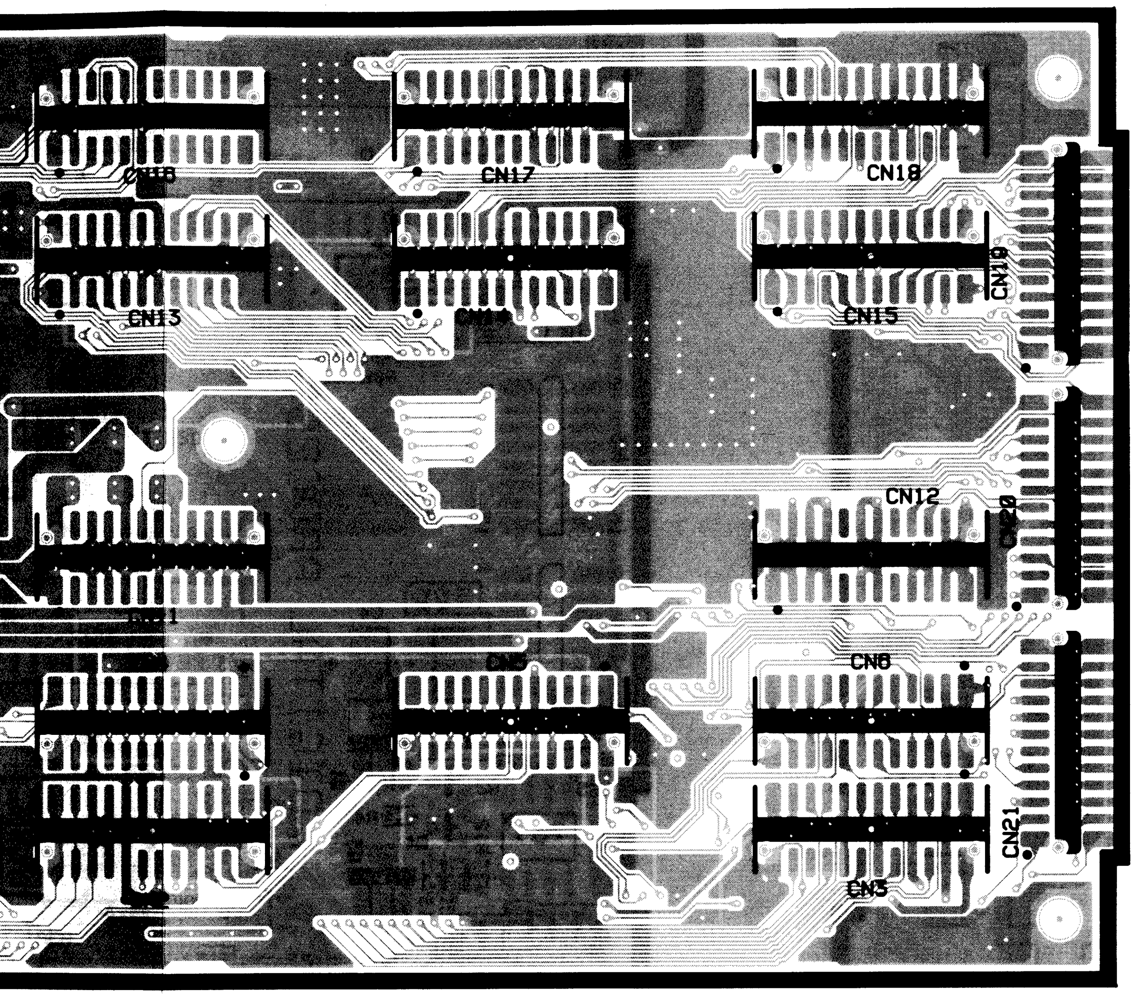
▨ COMPONENT SIDE

INTERMEDIATE PATTERN

▨ PATTERN SIDE

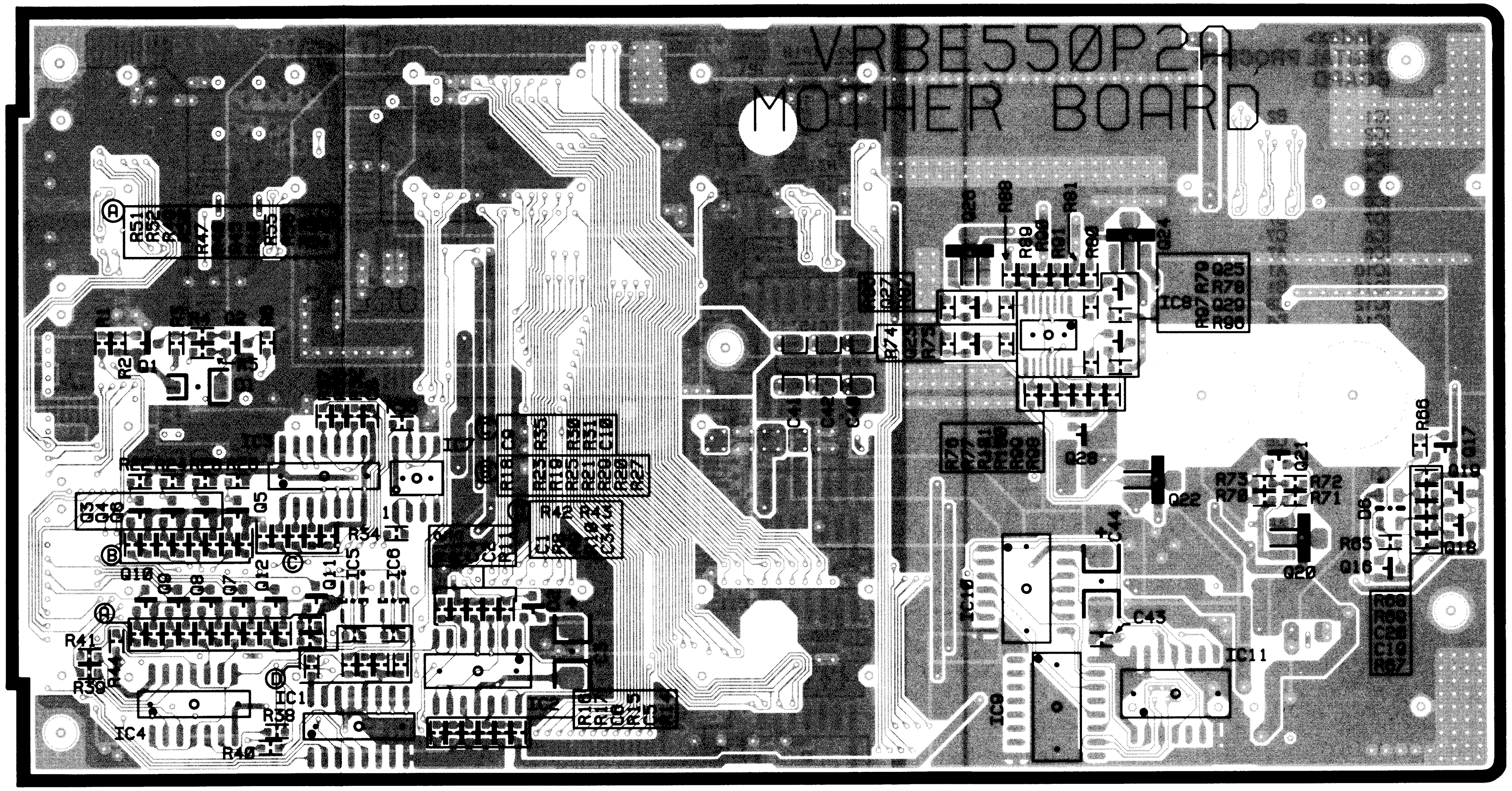
INTERMEDIATE PATTERN

# CONDUCTOR VIEW OF MOTHER BOARD (WV-E550E)


CN16
CN17
CN18
CN13
CN14
CN15
CN19
CN12
CN20
CN11
CN8
CN21
CN5

(COMPONENT SIDE VIEW)

MOTHER BOARD


VRBE550P2A
MOTHER BOARD
Ⓐ
R51
R52
R47
R53
R2
Q1
R5
IC3
IC2
IC7
Q3
Q4
Q6
Q5
Ⓑ
Q10
Q9
Q8
Q7
Q12
Ⓒ
Q11
IC5
IC6
R34
Ⓐ
R41
R44
R39
IC4
Ⓓ
IC1
R38
R40
R35
R19
R25
R21
R50
R51
R29
R27
R42
C1
C3
IC8
R74
C41
C42
C40
Q26
R88
R89
R91
R90
Q24
R79
R78
Q25
Q29
R87
R80
Q28
Q22
R73
R70
R72
R71
C44
IC10
C43
IC9
IC11
R66
Q17
Q19
Q18
D6
R65
Q16
Q20
Q21
C19
C20

(PATTERN SIDE VIEW)

▨ PATTERN SIDE

INTERMEDIATE PATTERN

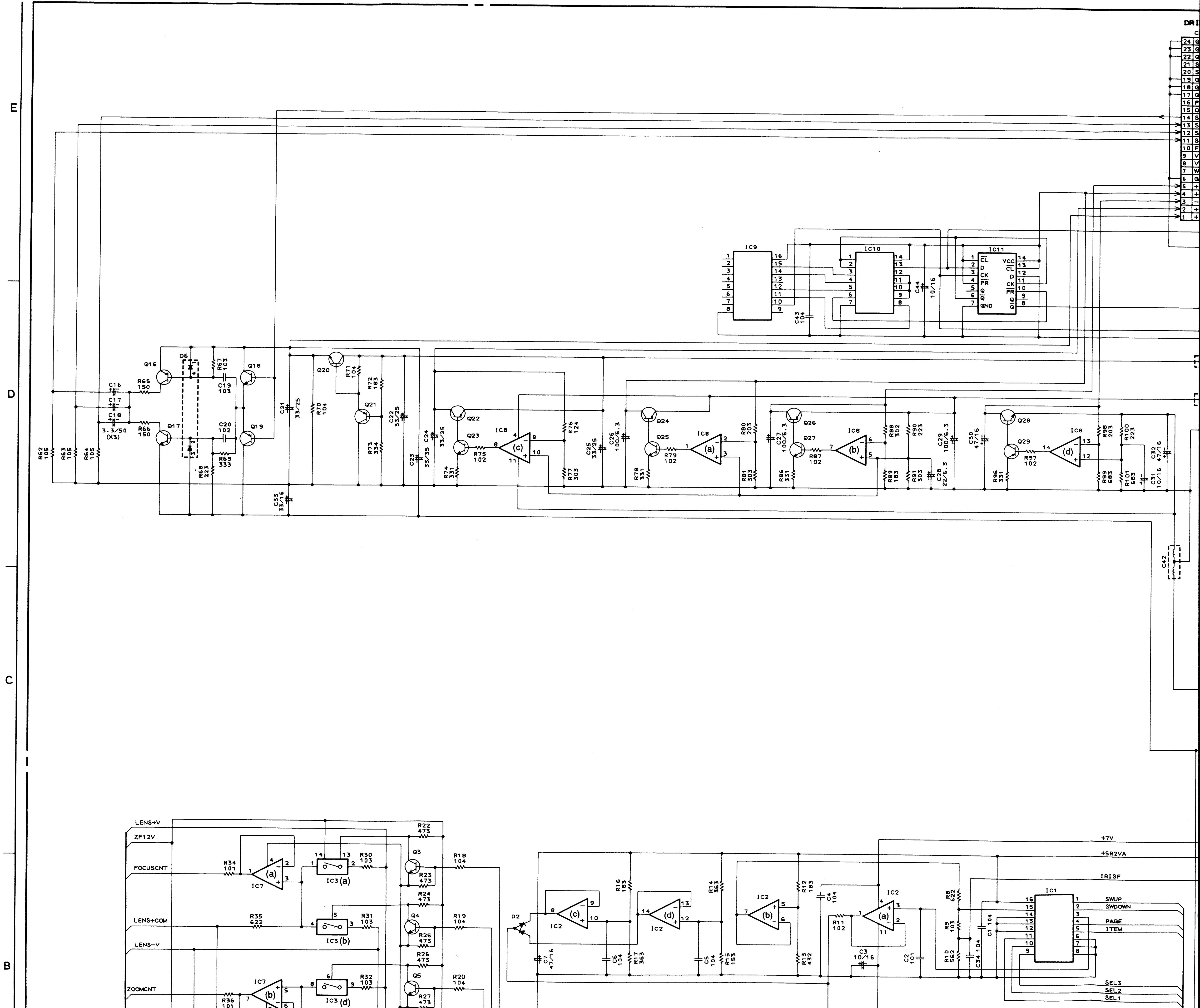
3 4 5 6 7 8 9 10

**< Index>**
**MOTHER BOARD**

| | |
|---|---|
| IC1 | B4 |
| IC2 | B2, B3, B4 |
| IC3 | B2 |
| IC4 | A2, B2 |
| IC5 | A2 |
| IC6 | A2 |
| IC7 | B1 |
| IC8 | D2, D3, D4 |
| IC9 | E3 |
| IC10 | E3 |
| IC11 | E4 |
| Q1 | A8 |
| Q2 | A8 |
| Q3 | B2 |
| Q4 | B2 |
| Q5 | B2 |
| Q6 | B2 |
| Q7 | B2 |
| Q8 | A2 |
| Q9 | A2 |
| Q10 | A2 |
| Q11 | A2 |
| Q12 | A2 |
| Q16 | D1 |
| Q17 | D1 |
| Q18 | D1 |
| Q19 | D1 |
| Q20 | D2 |
| Q21 | D2 |
| Q22 | D2 |
| Q23 | D2 |
| Q24 | D3 |
| Q25 | D3 |
| Q26 | D3 |
| Q27 | D3 |
| Q28 | D4 |
| Q29 | D4 |
| D1 | B8 |
| D2 | B2 |
| D6 | D1 |

MOTHER BOARD

# SCHEMATIC DIAGRAM OF MOTHER BO


E
D
C
B
DRI
IC9
IC10
IC11
VCC
CL
D
CK
PR
Q
GND
C43
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C44
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Q16
Q17
Q18
Q19
D6
C16
C17
C18
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R62
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R63
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R64
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R65
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150
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R69
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R71
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183
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R73
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33/35
C33
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R76
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R77
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C25
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C26
100/6.3
Q24
Q25
R78
331
R79
102
(a)
R80
203
R81
303
C27
100/6.3
Q26
Q27
R86
331
R87
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(b)
R88
302
R89
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R90
223
R91
303
C28
22/6.3
C29
100/6.3
C30
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Q28
Q29
R96
331
R97
102
(d)
R98
203
R99
683
R100
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C31
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C32
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C42
LENS+V
ZF12V
FOCUSCNT
LENS+COM
LENS−V
ZOOMCNT
R34
101
IC7
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IC3(b)
IC3(d)
R30
103
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R18
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104
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104
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473
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473
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104
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103
R10
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C1 104
C34 104
IC1
+7V
+5R2VA
IRISF
SWUP
SWDOWN
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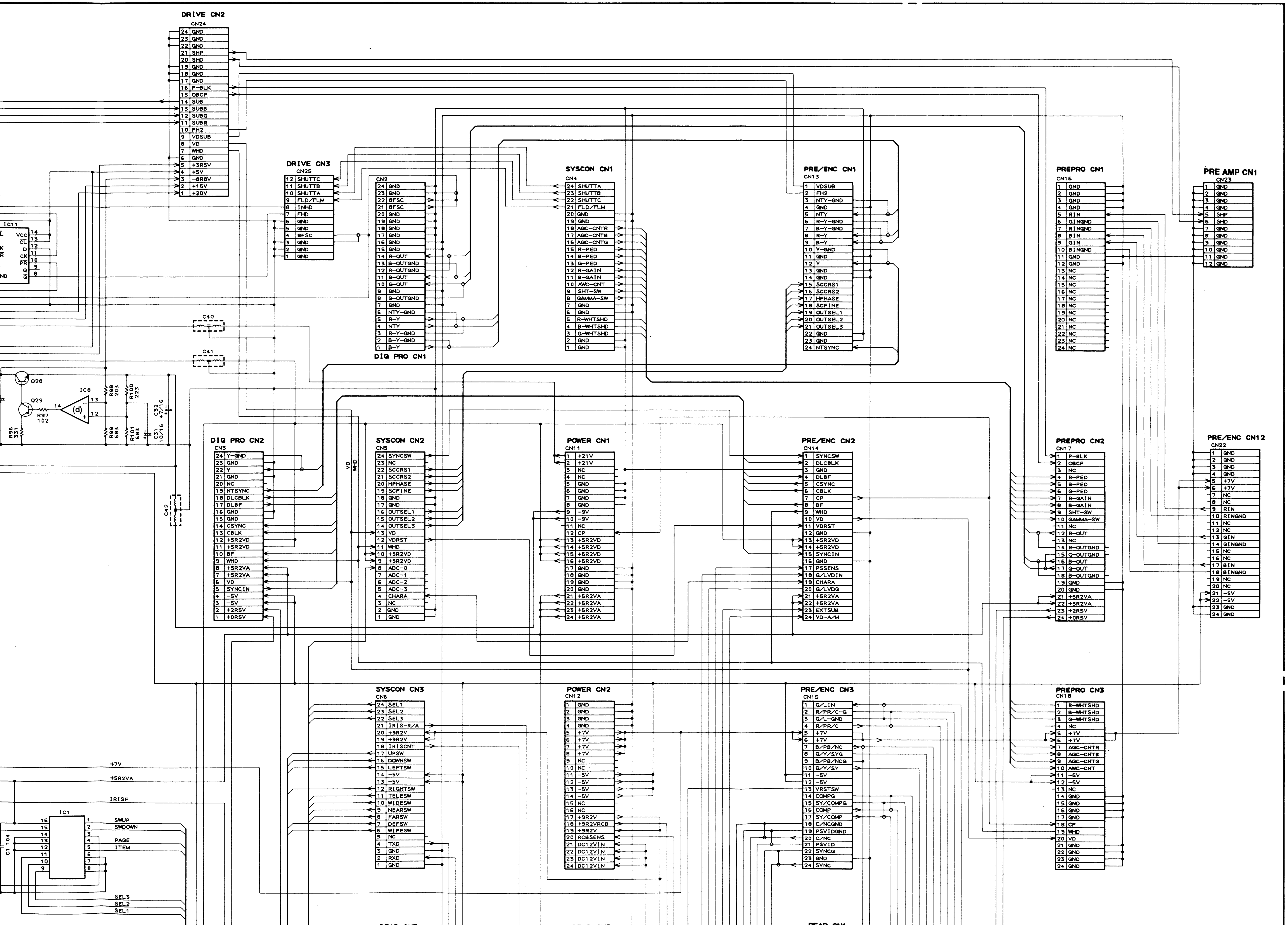
ITEM
SEL3
SEL2
SEL1

# M OF MOTHER BOARD (WV-E550E)


DRIVE CN2
CN24
24 GND
23 GND
22 GND
21 SHP
20 SHD
19 GND
18 GND
17 GND
16 P-BLK
15 OBCP
14 SUB
13 SUBB
12 SUBG
11 SUBR
10 FH2
9 VDSUB
8 VD
7 WHD
6 GND
5 +3R5V
4 +5V
3 -8R8V
2 +15V
1 +20V
DRIVE CN3
CN25
12 SHUTTC
11 SHUTTB
10 SHUTTA
9 FLD/FLM
8 INHD
7 FHD
6 GND
5 GND
4 8FSC
3 GND
2 GND
1 GND
CN2
24 GND
23 GND
22 8FSC
21 8FSC
20 GND
19 GND
18 GND
17 GND
16 GND
15 GND
14 R-OUT
13 B-OUTGND
12 R-OUTGND
11 B-OUT
10 G-OUT
9 GND
8 G-OUTGND
7 GND
6 NTY-GND
5 R-Y
4 NTY
3 R-Y-GND
2 B-Y-GND
1 B-Y
DIG PRO CN1
SYSCON CN1
CN4
24 SHUTTA
23 SHUTTB
22 SHUTTC
21 FLD/FLM
20 GND
19 GND
18 AGC-CNTR
17 AGC-CNTB
16 AGC-CNTG
15 R-PED
14 B-PED
13 G-PED
12 R-GAIN
11 B-GAIN
10 AWC-CNT
9 SHT-SW
8 GAMMA-SW
7 GND
6 GND
5 R-WHTSHD
4 B-WHTSHD
3 G-WHTSHD
2 GND
1 GND
PRE/ENC CN1
CN13
1 VDSUB
2 FH2
3 NTY-GND
4 GND
5 NTY
6 R-Y-GND
7 B-Y-GND
8 R-Y
9 B-Y
10 Y-GND
11 GND
12 Y
13 GND
14 GND
15 SCCRS1
16 SCCRS2
17 HPHASE
18 SCFINE
19 OUTSEL1
20 OUTSEL2
21 OUTSEL3
22 GND
23 GND
24 NTSYNC
PREPRO CN1
CN16
1 GND
2 GND
3 GND
4 GND
5 RIN
6 GINGND
7 RINGND
8 BIN
9 GIN
10 BINGND
11 GND
12 GND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
23 NC
24 NC
PRE AMP CN1
CN23
1 GND
2 GND
3 GND
4 GND
5 SHP
6 SHD
7 GND
8 GND
9 GND
10 GND
11 GND
12 GND
IC11
VCC
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C40
C41
Q28
Q29
IC8
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14
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R97
102
R96
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R98
203
R99
683
R100
223
R101
683
C32
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C31
10/16
C42
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CN3
24 Y-GND
23 GND
22 Y
21 GND
20 NC
19 NTSYNC
18 DLCBLK
17 DLBF
16 GND
15 GND
14 CSYNC
13 CBLK
12 +5R2VD
11 +5R2VD
10 BF
9 WHD
8 +5R2VA
7 +5R2VA
6 VD
5 SYNCIN
4 -5V
3 -5V
2 +2R5V
1 +0R5V
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CN5
24 SYNCSW
23 NC
22 SCCRS1
21 SCCRS2
20 HPHASE
19 SCFINE
18 GND
17 GND
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14 OUTSEL3
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12 VDRST
11 WHD
10 +5R2VD
9 +5R2VD
8 ADC-0
7 ADC-1
6 ADC-2
5 ADC-3
4 CHARA
3 NC
2 GND
1 GND
VD
WHD
POWER CN1
CN11
1 +21V
2 +21V
3 NC
4 NC
5 GND
6 GND
7 GND
8 GND
9 -9V
10 -9V
11 NC
12 CP
13 +5R2VD
14 +5R2VD
15 +5R2VD
16 +5R2VD
17 GND
18 GND
19 GND
20 GND
21 +5R2VA
22 +5R2VA
23 +5R2VA
24 +5R2VA
PRE/ENC CN2
CN14
1 SYNCSW
2 DLCBLK
3 GND
4 DLBF
5 CSYNC
6 CBLK
7 CP
8 BF
9 WHD
10 VD
11 VDRST
12 GND
13 +5R2VD
14 +5R2VD
15 SYNCIN
16 GND
17 PSSENS
18 G/LVDIN
19 CHARA
20 G/LVDG
21 +5R2VA
22 +5R2VA
23 EXTSUB
24 VD-A/M
PREPRO CN2
CN17
1 P-BLK
2 OBCP
3 NC
4 GND
5 R-PED
6 B-PED
7 G-PED
8 R-GAIN
9 B-GAIN
10 SHT-SW
11 GAMMA-SW
12 R-OUT
13 NC
14 R-OUTGND
15 G-OUTGND
16 B-OUT
17 G-OUT
18 B-OUTGND
19 GND
20 GND
21 +5R2VA
22 +5R2VA
23 +2R5V
24 +0R5V
PRE/ENC CN12
CN22
1 GND
2 GND
3 GND
4 GND
5 +7V
6 +7V
7 NC
8 NC
9 RIN
10 RINGND
11 NC
12 NC
13 GIN
14 GINGND
15 NC
16 NC
17 BIN
18 BINGND
19 NC
20 NC
21 -5V
22 -5V
23 GND
24 GND
+7V
+5R2VA
IRISF
IC1
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13
12
11
10
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1
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3
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7
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SWDOWN
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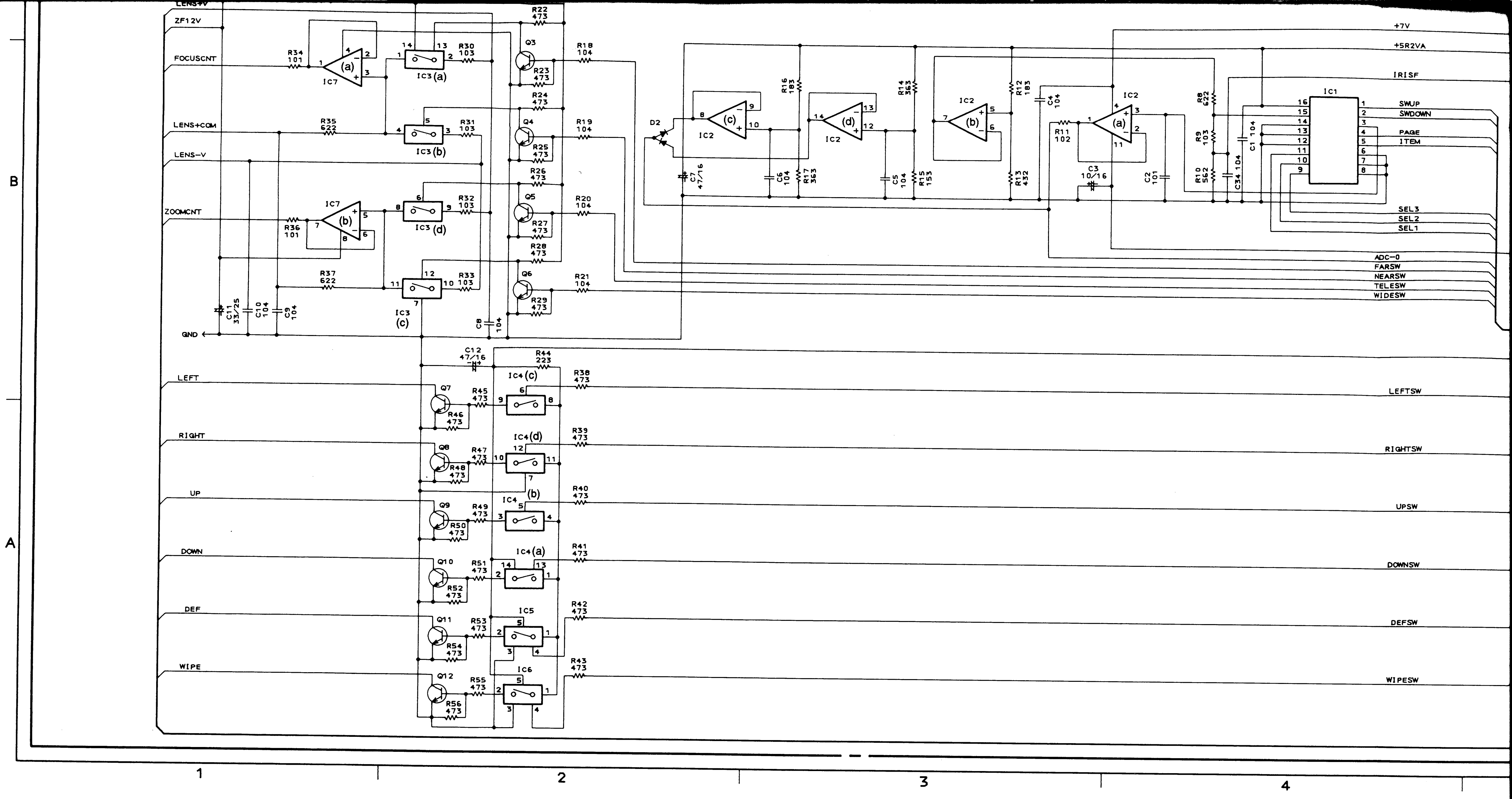
C104
SEL3
SEL2
SEL1
SYSCON CN3
CN6
24 SEL1
23 SEL2
22 SEL3
21 IRIS-R/A
20 +9R2V
19 +9R2V
18 IRISCNT
17 UPSW
16 DOWNSW
15 LEFTSW
14 -5V
13 -5V
12 RIGHTSW
11 TELESW
10 WIDESW
9 NEARSW
8 FARSW
7 DEFSW
6 WIPESW
5 NC
4 TXD
3 GND
2 RXD
1 GND
POWER CN2
CN12
1 GND
2 GND
3 GND
4 GND
5 +7V
6 +7V
7 +7V
8 +7V
9 NC
10 NC
11 -5V
12 -5V
13 -5V
14 -5V
15 NC
16 NC
17 +9R2V
18 +9R2VRCB
19 +9R2V
20 RCBSENS
21 DC12VIN
22 DC12VIN
23 DC12VIN
24 DC12VIN
PRE/ENC CN3
CN15
1 G/LIN
2 R/PR/C-G
3 G/L-GND
4 R/PR/C
5 +7V
6 +7V
7 B/PB/NC
8 G/Y/SYG
9 B/PB/NCG
10 G/Y/SY
11 -5V
12 -5V
13 VRSTSW
14 COMPG
15 SY/COMPG
16 COMP
17 SY/COMP
18 C/NCGND
19 PSVIDGND
20 C/NC
21 PSVID
22 SYNCG
23 GND
24 SYNC
PREPRO CN3
CN18
1 R-WHTSHD
2 B-WHTSHD
3 G-WHTSHD
4 NC
5 +7V
6 +7V
7 AGC-CNTR
8 AGC-CNTB
9 AGC-CNTG
10 AWC-CNT
11 -5V
12 -5V
13 NC
14 GND
15 GND
16 GND
17 GND
18 CP
19 WHD
20 VD
21 GND
22 GND
23 GND
24 GND


LENS+V
ZF12V
FOCUSCNT
LENS+COM
LENS-V
ZOOMCNT
GND
LEFT
RIGHT
UP
DOWN
DEF
WIPE
IC7 (a)
IC7 (b)
IC3 (a)
IC3 (b)
IC3 (c)
IC3 (d)
IC4 (a)
IC4 (b)
IC4 (c)
IC4 (d)
IC5
IC6
IC2 (a)
IC2 (b)
IC2 (c)
IC2 (d)
IC1
D2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
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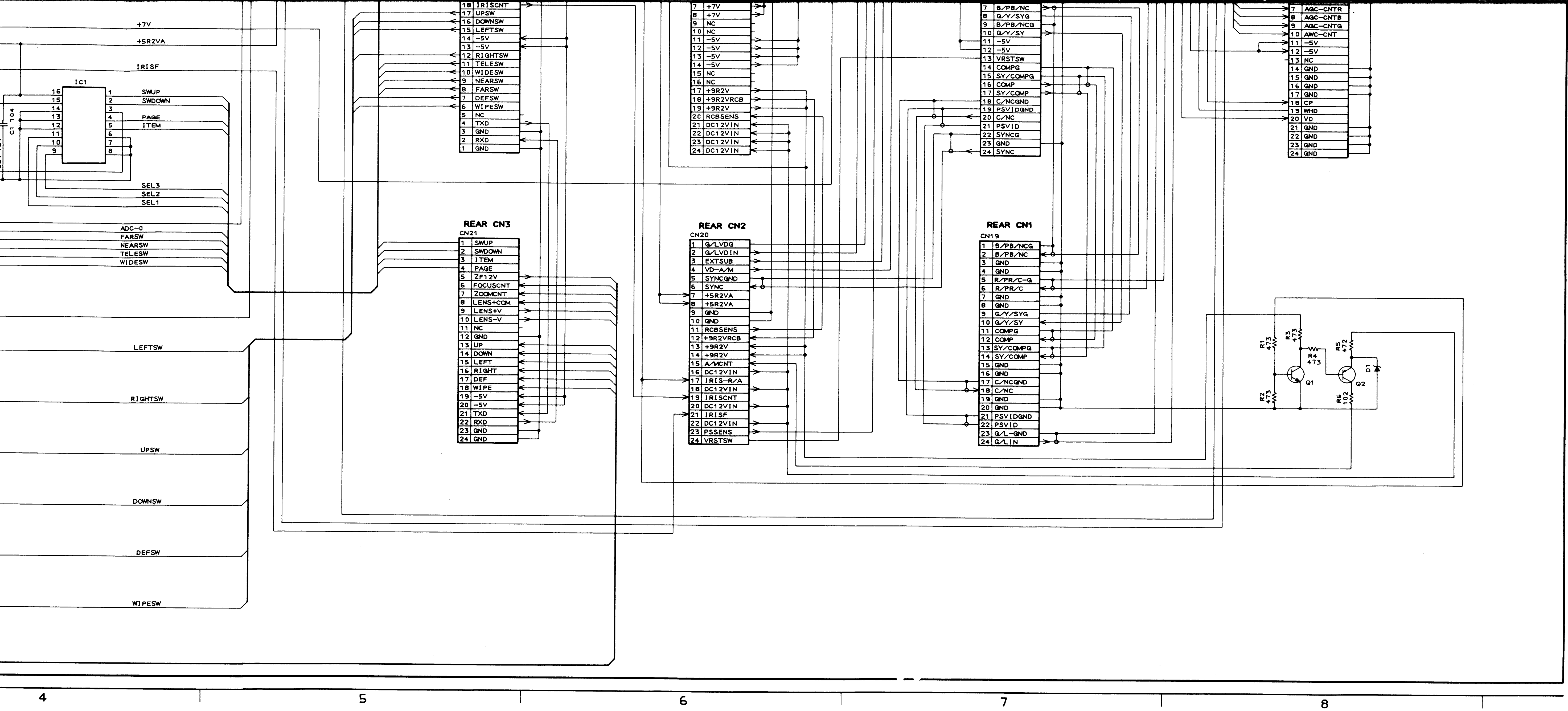
R35 622
R36 101
R37 622
R30 103
R31 103
R32 103
R33 103
R22 473
R23 473
R24 473
R25 473
R26 473
R27 473
R28 473
R29 473
R18 104
R19 104
R20 104
R21 104
R44 223
R38 473
R39 473
R40 473
R41 473
R42 473
R43 473
R45 473
R46 473
R47 473
R48 473
R49 473
R50 473
R51 473
R52 473
R53 473
R54 473
R55 473
R56 473
R16 183
R17 363
R14 363
R15 153
R12 183
R13 432
R11 102
R8 622
R9 103
R10 562
C11 33/25
C10 104
C9 104
C8 104
C12 47/16
C7 47/16
C6 104
C5 104
C4 104
C3 10/16
C2 101
C1 104
C34 104
+7V
+5R2VA
IRISF
SWUP
SWDOWN
PAGE
ITEM
SEL3
SEL2
SEL1
ADC-0
FARSW
NEARSW
TELESW
WIDESW
LEFTSW
RIGHTSW
UPSW
DOWNSW
DEFSW
WIPESW
B
A
1
2
3
4

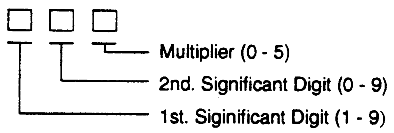
## MOTHER BOARD

| | IC1 | IC2 | IC3 | IC4 | IC5 | IC6 | IC7 | IC8 | IC9 | IC10 | IC11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 5.2 | 0.1 | 0.3 | 5.2 | 5.2 | 5.2 | 0.2 | 1.6 | 0 | 4.5 | 4.9 |
| 2 | 5.2 | 0 | 1.9 | 0 | 0 | 0 | 2.2 | 3.0 | 2.5 | 0.2 | 0.4 |
| 3 | 0.1 | 0 | 0.4 | - | 0 | 0 | 0.3 | 3.0 | 2.5 | 2.2 | 2.4 |
| 4 | 5.2 | 0 | 0.4 | 5.2 | 0 | 0 | 0 | 5.2 | 2.5 | 2.2 | 5.0 |
| 5 | 5.2 | 0 | 0 | 0 | 5.2 | 5.2 | 0.3 | 3.0 | 2.5 | 2.2 | 0.5 |
| 6 | 0 | 0 | 0 | 0 | | | 0.2 | 0.2 | 2.5 | 4.9 | 1.8 |
| 7 | 0 | 0 | 2.1 | 0 | | | 0.2 | 0.6 | 2.7 | 0 | 0 |
| 8 | 0 | 3.5 | 0.3 | 5.2 | | | 0 | 0.6 | 0 | 0 | 4.4 |
| 9 | 0.1 | 3.5 | 0.4 | 0 | | | | 3.0 | 0.3 | 5.0 | 0.6 |
| 10 | 0.1 | 3.5 | 2.1 | 0 | | | | 3.0 | 0.2 | 0.2 | 4.9 |
| 11 | 0.1 | -5.2 | 0.4 | 5.2 | | | | -9.0 | 0 | 5.0 | 4.5 |
| 12 | 0.1 | 1.5 | 0 | 0 | | | | -6.8 | 2.2 | 5.0 | 0 |
| 13 | 0 | 0 | 0 | 0 | | | | -6.8 | 2.5 | 0.4 | 5.0 |
| 14 | 0 | 1.5 | 0 | 5.2 | | | | - | 0.2 | 5.0 | 5.0 |
| 15 | 0.1 | | | | | | | | 2.2 | | |
| 16 | 5.2 | | | | | | | | 5.0 | | |

| | B | C | E |
|---|---|---|---|
| Q1 | 0 | 9.2 | 0 |
| 2 | 9.2 | 2.2 | 8.3 |
| 3 | 0.6 | 0 | 0 |
| 4 | 0.6 | 0 | 0 |
| 5 | 0.6 | 0 | 0 |
| 6 | 0.6 | 0 | 0 |
| 7 | 0 | 0.5 | 0 |
| 8 | 0 | 0.5 | 0 |
| 9 | 0 | 0.5 | 0 |
| 10 | 0.1 | - | 0 |
| 11 | 0 | 4.0 | 0 |
| 12 | 0 | 0.5 | 0 |
| 16 | 18.9 | -4.9 | 18.8 |
| 17 | -4.6 | -4.9 | -5.2 |
| 18 | 4.9 | 18.8 | 4.4 |
| 19 | 4.9 | -5.2 | 4.4 |
| 20 | 19.0 | 21.0 | 18.8 |
| 21 | 20.0 | 0 | 19.3 |
| 22 | 20.5 | 14.9 | 21.1 |
| 23 | 0.6 | 20.5 | 0 |
| 24 | 1.2 | 5.0 | 5.2 |
| 25 | 1.5 | 4.4 | 0.9 |
| 26 | 4.5 | 3.5 | 5.2 |
| 27 | 0.6 | 4.5 | 0 |
| 28 | -8.4 | -8.8 | -8.9 |
| 29 | - | -8.4 | 0 |


+7V
+5R2VA
IRISF
IC1
C1 104
SWUP
SWDOWN
PAGE
ITEM
SEL3
SEL2
SEL1
ADC-0
FARSW
NEARSW
TELESW
WIDESW
LEFTSW
RIGHTSW
UPSW
DOWNSW
DEFSW
WIPESW
18 IRISCNT
17 UPSW
16 DOWNSW
15 LEFTSW
14 -5V
13 -5V
12 RIGHTSW
11 TELESW
10 WIDESW
9 NEARSW
8 FARSW
7 DEFSW
6 WIPESW
5 NC
4 TXD
3 GND
2 RXD
1 GND
7 +7V
8 +7V
9 NC
10 NC
11 -5V
12 -5V
13 -5V
14 -5V
15 NC
16 NC
17 +9R2V
18 +9R2VRCB
19 +9R2V
20 RCBSENS
21 DC12VIN
22 DC12VIN
23 DC12VIN
24 DC12VIN
7 B/PB/NC
8 G/Y/SYG
9 B/PB/NCG
10 G/Y/SY
11 -5V
12 -5V
13 VRSTSW
14 COMPG
15 SY/COMPG
16 COMP
17 SY/COMP
18 C/NCGND
19 PSVIDGND
20 C/NC
21 PSVID
22 SYNCG
23 GND
24 SYNC
7 AGC-CNTR
8 AGC-CNTB
9 AGC-CNTG
10 AWC-CNT
11 -5V
12 -5V
13 NC
14 GND
15 GND
16 GND
17 GND
18 CP
19 WHD
20 VD
21 GND
22 GND
23 GND
24 GND
REAR CN3
CN21
1 SWUP
2 SWDOWN
3 ITEM
4 PAGE
5 ZF12V
6 FOCUSCNT
7 ZOOMCNT
8 LENS+COM
9 LENS+V
10 LENS-V
11 NC
12 GND
13 UP
14 DOWN
15 LEFT
16 RIGHT
17 DEF
18 WIPE
19 -5V
20 -5V
21 TXD
22 RXD
23 GND
24 GND
REAR CN2
CN20
1 G/LVDG
2 G/LVDIN
3 EXTSUB
4 VD-A/M
5 SYNCGND
6 SYNC
7 +5R2VA
8 +5R2VA
9 GND
10 GND
11 RCBSENS
12 +9R2VRCB
13 +9R2V
14 +9R2V
15 A/MCNT
16 DC12VIN
17 IRIS-R/A
18 DC12VIN
19 IRISCNT
20 DC12VIN
21 IRISF
22 DC12VIN
23 PSSENS
24 VRSTSW
REAR CN1
CN19
1 B/PB/NCG
2 B/PB/NC
3 GND
4 GND
5 R/PR/C-G
6 R/PR/C
7 GND
8 GND
9 G/Y/SYG
10 G/Y/SY
11 COMPG
12 COMP
13 SY/COMPG
14 SY/COMP
15 GND
16 GND
17 C/NCGND
18 C/NC
19 GND
20 GND
21 PSVIDGND
22 PSVID
23 G/L-GND
24 G/LIN
R1 473
R3 473
R4 473
R5 472
R2 473
R6 102
Q1
Q2
D1
4
5
6
7
8

**Note:** **The value indicated in the schematic diagram should be read as follows:**


Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

**<Example>**

For Resistor:

330 → 33 x $10^0$ = 33 Ω
561 → 56 x $10^1$ = 560 Ω
123 → 12 x $10^3$ = 12k Ω
0R00 = 0 Ω

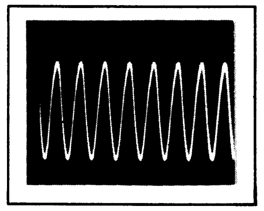
For Capacitor:

820 → 82 x $10^0$ = 82 pF
102 → 10 x $10^2$ = 1000 pF = 0.001 µF
104 → 10 x $10^4$ = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.

# SCHEMATIC DIAGRAM OF SYSTEM CO

## SYSTEM CONTROL BOARD

1. 0.1µsec/DIV 1V/DIV



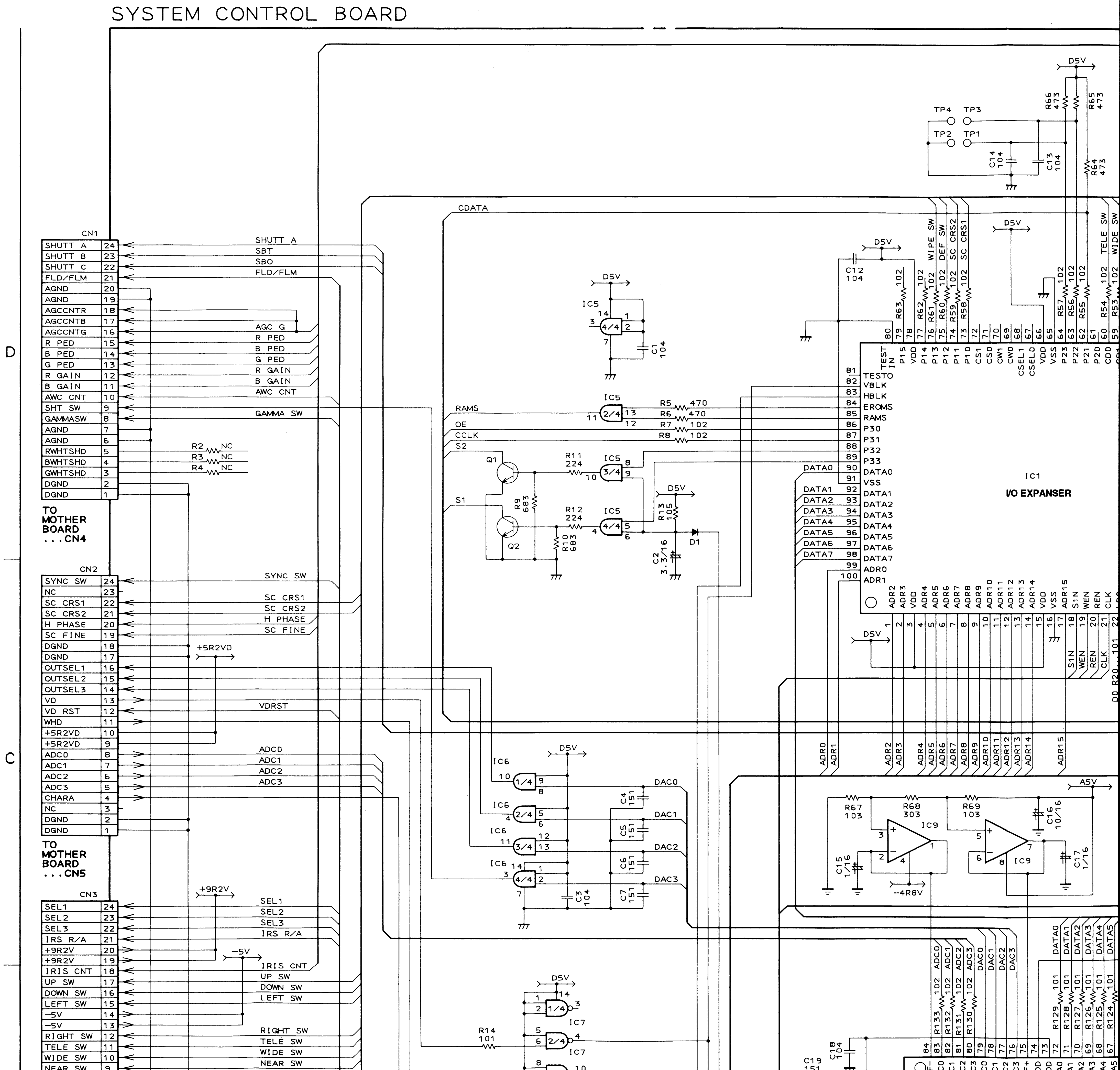
### < Index>
### SYSTEM CONTROL BOARD

| | |
|---|---|
| IC1 | D3 |
| IC2 | B3 |
| IC3 | C4 |
| IC4 | C5 |
| IC5 | D2 |
| IC6 | C2 |
| IC7 | B2 |
| IC8 | A2, B2 |
| IC9 | C3 |
| IC10 | A4 |
| IC12 | D4 |
| IC13 | D5 |
| IC14 | B5, C5 |
| IC15 | C6 |
| IC16 | B4, B5 |
| IC17 | B4 |
| IC18 | B4 |
| IC19 | A6, B6 |
| Q1 | D2 |
| Q2 | D2 |
| Q9 | A3 |
| Q10 | A3 |
| Q11 | A3 |
| Q12 | B5 |
| Q13 | B5 |
| Q14 | C5 |
| Q15 | C5 |
| Q16 | B6 |
| Q17 | B6 |
| Q18 | A6 |
| Q19 | A6 |
| Q20 | A6 |
| Q21 | A6 |
| D1 | D2 |
| D3 | A3 |
| D4 | A3 |
| D5 | A3 |
| D6 | A3 |
| D7 | B5 |
| D8 | B5 |
| D9 | C5 |
| D10 | B5 |

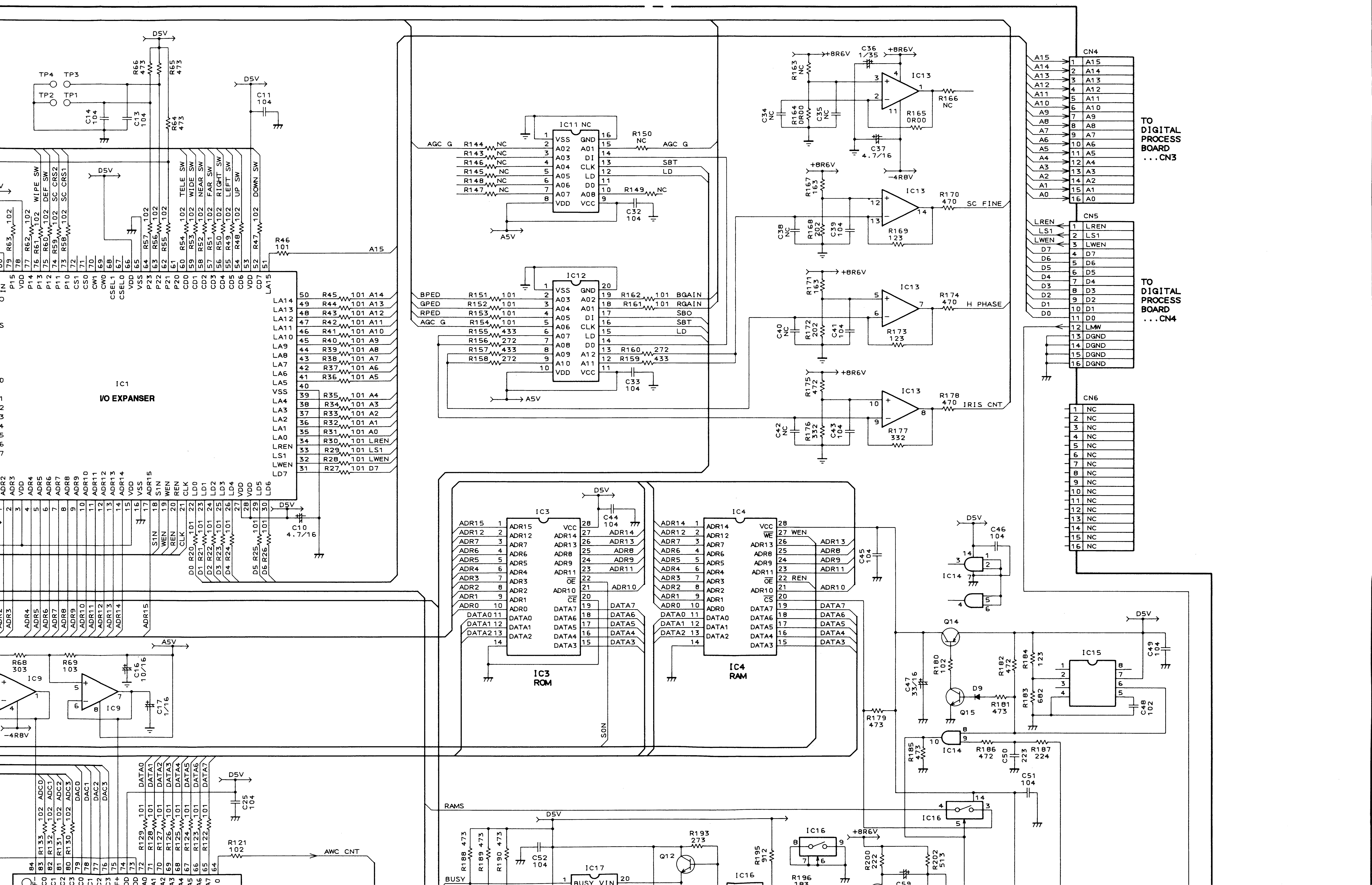
### SYSTEM CONTROL BOARD

| | IC5 | IC6 | IC7 | IC8 | IC9 | IC10 | IC14 | IC16 | IC18 | IC19 | IC17 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 5.0 | 5.0 | 5.0 | 5.0 | 1.0 | 0.3 | 0 | 1.2 | 2.1 | 0.7 | 0 |
| 2 | 5.0 | 3.7 | 5.0 | 5.0 | 1.0 | 1.4 | 0 | 1.2 | 0 | 1.3 | 5.0 |
| 3 | 5.0 | 4.9 | 0 | 5.0 | 1.0 | 0.4 | 0 | 4.9 | 5.0 | 1.3 | 0 |
| 4 | 0 | 5.0 | 4.8 | 5.0 | -5.0 | 0 | 0 | 2.9 | 5.0 | 5.2 | 5.0 |
| 5 | 0 | 5.0 | 5.0 | 5.0 | 4.0 | 1.2 | 0 | 4.9 | 5.0 | -1.3 | 5.0 |
| 6 | 4.7 | 3.7 | 0.2 | 5.0 | 3.7 | 4.7 | 0 | 0 | 2.1 | -1.3 | 0.5 |
| 7 | 0 | 0 | 0 | 0 | 3.7 | 5.0 | 0 | 0 | 2.1 | -0.5 | 2.5 |
| 8 | 0 | 1.1 | 5.0 | 5.0 | 5.0 | 0.5 | 4.7 | 0 | 0 | 0 | 2.4 |
| 9 | 4.7 | 5.0 | 5.0 | 5.2 | | | 4.6 | 0 | 0 | 0 | 2.4 |
| 10 | 0 | 0 | 0 | 5.0 | | | 5.0 | 5.0 | 0 | 0 | 0 |
| 11 | 3.9 | 5.0 | 4.2 | 5.0 | | | 5.0 | 5.0 | 2.1 | -5.2 | 4.8 |
| 12 | 3.7 | 5.0 | 5.0 | 5.0 | | | 4.7 | 5.0 | 0 | 2.2 | 5.0 |
| 13 | 5.0 | 3.7 | 0.8 | - | | | 4.7 | 5.0 | - | 2.2 | 4.8 |
| 14 | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 | 0 | 0.5 | 0.6 |
| 15 | | | | | | | | | | | 0 |
| 16 | | | | | | | | | | | 5.0 |
| 17 | | | | | | | | | | | 0 |
| 18 | | | | | | | | | | | 0 |
| 19 | | | | | | | | | | | 1.2 |
| 20 | | | | | | | | | | | 1.2 |

| | B | C | E |
|---|---|---|---|
| Q2 | 0 | 2.1 | 0 |
| 9 | 4.2 | 4.9 | 5.0 |
| 10 | 0.7 | 0.1 | 0 |
| 12 | 1.7 | 5.0 | 1.2 |
| 13 | 0.3 | 0 | 0.9 |


SYSTEM CONTROL BOARD
D
C
CN1
SHUTT A 24
SHUTT B 23
SHUTT C 22
FLD/FLM 21
AGND 20
AGND 19
AGCCNTR 18
AGCCNTB 17
AGCCNTG 16
R PED 15
B PED 14
G PED 13
R GAIN 12
B GAIN 11
AWC CNT 10
SHT SW 9
GAMMASW 8
AGND 7
AGND 6
RWHTSHD 5
BWHTSHD 4
GWHTSHD 3
DGND 2
DGND 1
TO MOTHER BOARD ...CN4
SHUTT A
SBT
SBO
FLD/FLM
AGC G
R PED
B PED
G PED
R GAIN
B GAIN
AWC CNT
GAMMA SW
R2 NC
R3 NC
R4 NC
CN2
SYNC SW 24
NC 23
SC CRS1 22
SC CRS2 21
H PHASE 20
SC FINE 19
DGND 18
DGND 17
OUTSEL1 16
OUTSEL2 15
OUTSEL3 14
VD 13
VD RST 12
WHD 11
+5R2VD 10
+5R2VD 9
ADC0 8
ADC1 7
ADC2 6
ADC3 5
CHARA 4
NC 3
DGND 2
DGND 1
TO MOTHER BOARD ...CN5
SYNC SW
SC CRS1
SC CRS2
H PHASE
SC FINE
+5R2VD
VDRST
ADC0
ADC1
ADC2
ADC3
CN3
SEL1 24
SEL2 23
SEL3 22
IRS R/A 21
+9R2V 20
+9R2V 19
IRIS CNT 18
UP SW 17
DOWN SW 16
LEFT SW 15
-5V 14
-5V 13
RIGHT SW 12
TELE SW 11
WIDE SW 10
NEAR SW 9
+9R2V
-5V
SEL1
SEL2
SEL3
IRS R/A
IRIS CNT
UP SW
DOWN SW
LEFT SW
RIGHT SW
TELE SW
WIDE SW
NEAR SW
CDATA
RAMS
OE
CCLK
S2
S1
Q1
Q2
R9 683
R10 683
R11 224
R12 224
IC5
D5V
C1 104
R5 470
R6 470
R7 102
R8 102
R13 105
D1
C2 3.3/16
IC6
C3 104
C4 151
C5 151
C6 151
C7 151
DAC0
DAC1
DAC2
DAC3
IC7
R14 101
TP4 TP3
TP2 TP1
C14 104
C13 104
R66 473
R65 473
R64 473
C12 104
R63 102
R62 102
R61 102
R60 102
R59 102
R58 102
R57 102
R56 102
R55 102
R54 102
R53 102
WIPE SW
DEF SW
SC CRS2
SC CRS1
TELE SW
WIDE SW
TEST IN
P15
VDD
P14
P13
P12
P11
P10
CS1
CS0
CW1
CW0
CSEL1
CSEL0
VDD
VSS
P23
P22
P21
P20
CD0
TEST0
VBLK
HBLK
EROMS
RAMS
P30
P31
P32
P33
DATA0
VSS
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
ADR0
ADR1
IC1
I/O EXPANSER
ADR2
ADR3
ADR4
ADR5
ADR6
ADR7
ADR8
ADR9
ADR10
ADR11
ADR12
ADR13
ADR14
ADR15
S1N
WEN
REN
CLK
A5V
R67 103
R68 303
R69 103
IC9
C15 1/16
C16 10/16
C17 1/16
-4R8V
C18 104
C19 151
R133 102
R132 102
R131 102
R130 102
R129 101
R128 101
R127 101
R126 101
R125 101
R124 101
ADC0
ADC1
ADC2
ADC3
DAC0
DAC1
DAC2
DAC3
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5

# M OF SYSTEM CONTROL BOARD (WV-E550E)



IC1
I/O EXPANSER
IC3
ROM
IC4
RAM
IC9
IC11
IC12
IC13
IC14
IC15
IC16
IC17
Q12
Q14
Q15
D9
CN4
CN5
CN6
TO DIGITAL PROCESS BOARD ...CN3
TO DIGITAL PROCESS BOARD ...CN4
TP1
TP2
TP3
TP4
D5V
A5V
+8R6V
-4R8V
WIPE SW
DEF SW
SC CRS2
SC CRS1
TELE SW
WIDE SW
NEAR SW
FAR SW
RIGHT SW
LEFT SW
UP SW
DOWN SW
AGC G
SBT
LD
BPED
GPED
RPED
BGAIN
RGAIN
SBO
SC FINE
H PHASE
IRIS CNT
RAMS
AWC CNT
BUSY
S0N
WEN
REN
LREN
LS1
LWEN
LMW
DGND
NC

|  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 0 | 0 | 0 | 0 | 3.7 | 5.0 | 0 | 0 | 2.1 | -0.5 | 2.5 |
| 8 | 0 | 1.1 | 5.0 | 5.0 | 5.0 | 0.5 | 4.7 | 0 | 0 | 0 | 2.4 |
| 9 | 4.7 | 5.0 | 5.0 | 5.2 |  |  | 4.6 | 0 | 0 | 0 | 2.4 |
| 10 | 0 | 0 | 0 | 5.0 |  |  | 5.0 | 5.0 | 0 | 0 | 0 |
| 11 | 3.9 | 5.0 | 4.2 | 5.0 |  |  | 5.0 | 5.0 | 2.1 | -5.2 | 4.8 |
| 12 | 3.7 | 5.0 | 5.0 | 5.0 |  |  | 4.7 | 5.0 | 0 | 2.2 | 5.0 |
| 13 | 5.0 | 3.7 | 0.8 | - |  |  | 4.7 | 5.0 | - | 2.2 | 4.8 |
| 14 | 5.0 | 5.0 | 5.0 | 5.0 |  |  | 5.0 | 5.0 | 0 | 0.5 | 0.6 |
| 15 |  |  |  |  |  |  |  |  |  |  | 0 |
| 16 |  |  |  |  |  |  |  |  |  |  | 5.0 |
| 17 |  |  |  |  |  |  |  |  |  |  | 0 |
| 18 |  |  |  |  |  |  |  |  |  |  | 0 |
| 19 |  |  |  |  |  |  |  |  |  |  | 1.2 |
| 20 |  |  |  |  |  |  |  |  |  |  | 1.2 |

**Note:** **The value indicated in the schematic diagram should be read as follows:**

☐ ☐ ☐

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Siginificant Digit (1 - 9)

**<Example>**

For Resistor:

330 → $33 \times 10^0$ = 33 Ω

561 → $56 \times 10^1$ = 560 Ω

123 → $12 \times 10^3$ = 12k Ω

0R00 = 0 Ω

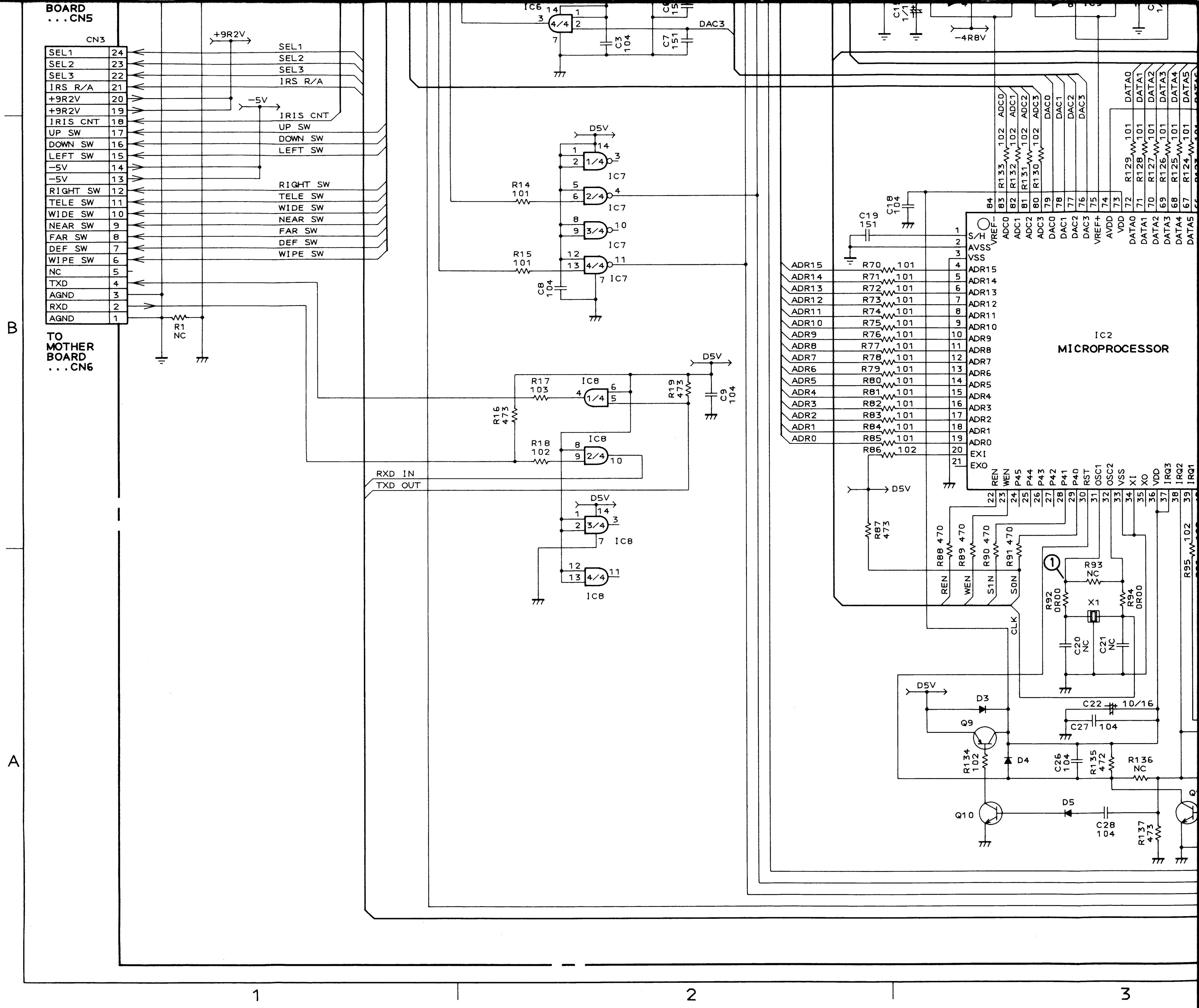
For Capacitor:

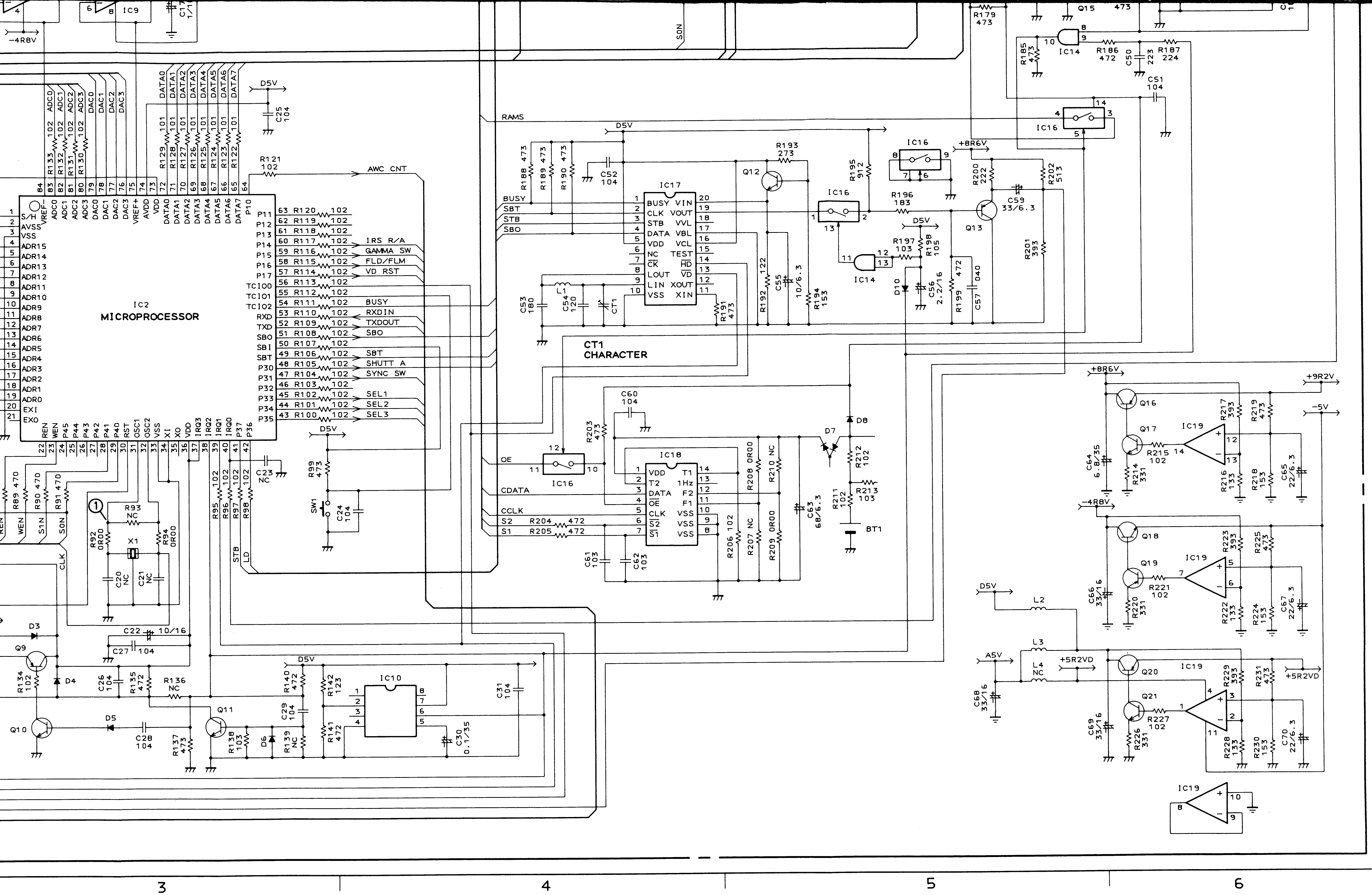
820 → $82 \times 10^0$ = 82 pF

102 → $10 \times 10^2$ = 1000 pF = 0.001 μF

104 → $10 \times 10^4$ = 100000 pF = 0.1 μF

The suffix attached to capacitance indicates a type of capacitor.

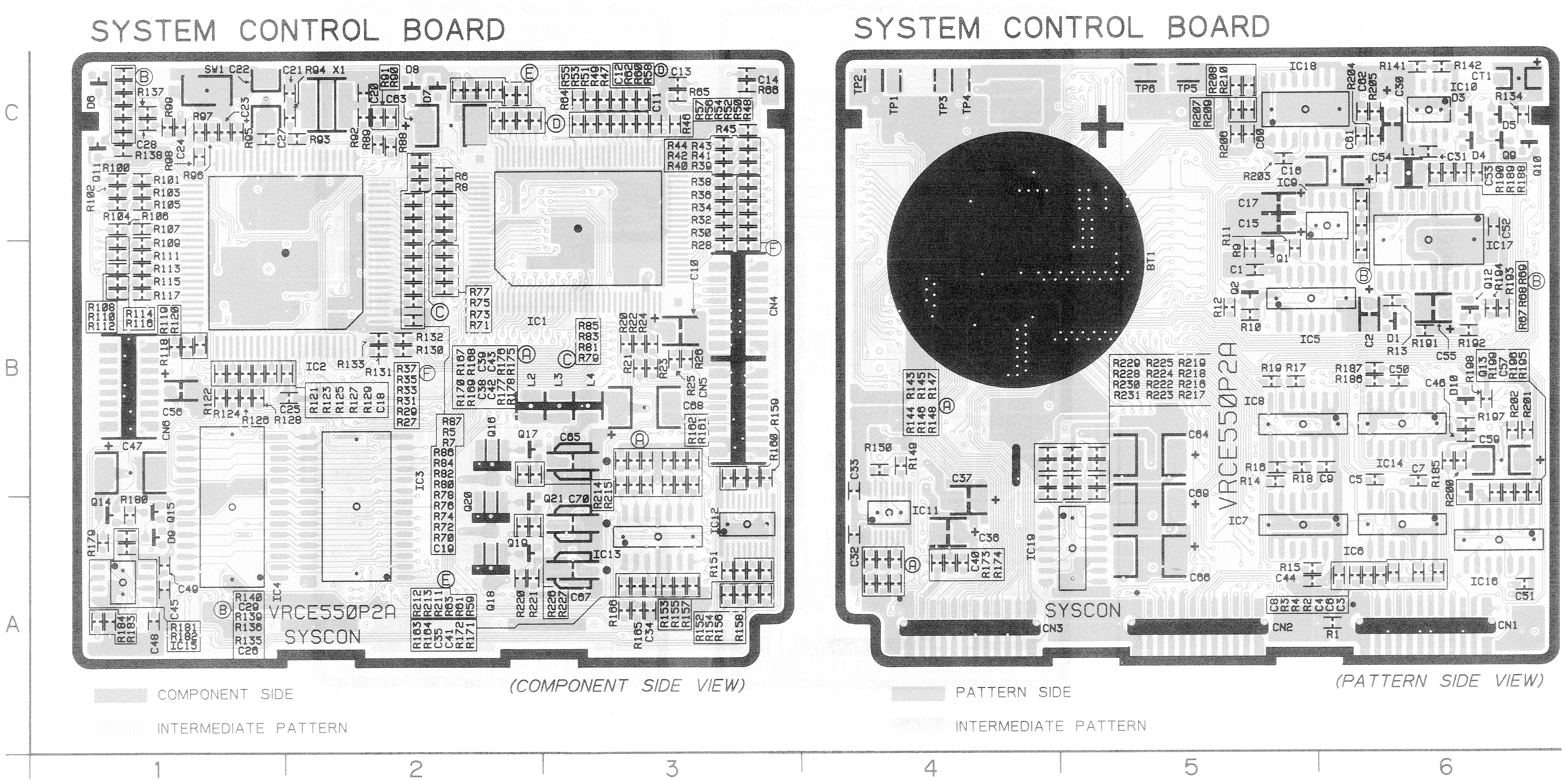

BOARD
. . . CN5
CN3
SEL1 24
SEL2 23
SEL3 22
IRS R/A 21
+9R2V 20
+9R2V 19
IRIS CNT 18
UP SW 17
DOWN SW 16
LEFT SW 15
-5V 14
-5V 13
RIGHT SW 12
TELE SW 11
WIDE SW 10
NEAR SW 9
FAR SW 8
DEF SW 7
WIPE SW 6
NC 5
TXD 4
AGND 3
RXD 2
AGND 1
TO
MOTHER
BOARD
. . . CN6
+9R2V
-5V
R1
NC
IC6
DAC3
C3 104
C7 151
D5V
IC7
R14 101
R15 101
C8 104
IC8
R16 473
R17 103
R18 102
R19 473
C9 104
RXD IN
TXD OUT
C19 151
C18 104
-4R8V
IC2
MICROPROCESSOR
ADC0
ADC1
ADC2
ADC3
DAC0
DAC1
DAC2
DAC3
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
S/H
AVSS
VSS
VREF-
VREF+
AVDD
VDD
ADR15
ADR14
ADR13
ADR12
ADR11
ADR10
ADR9
ADR8
ADR7
ADR6
ADR5
ADR4
ADR3
ADR2
ADR1
ADR0
EXI
EXO
R70 101
R71 101
R72 101
R73 101
R74 101
R75 101
R76 101
R77 101
R78 101
R79 101
R80 101
R81 101
R82 101
R83 101
R84 101
R85 101
R86 102
R133 102
R132 102
R131 102
R130 102
R129 101
R128 101
R127 101
R126 101
R125 101
R124 101
REN
WEN
P45
P44
P43
P42
P41
P40
RST
OSC1
OSC2
VSS
XI
XO
VDD
IRQ3
IRQ2
IRQ1
R87 473
R88 470
R89 470
R90 470
R91 470
R95 102
REN
WEN
SIN
SON
CLK
①
R92 0R00
R93 NC
R94 0R00
X1
C20 NC
C21 NC
D5V
D3
Q9
R134 102
D4
C26 104
R135 472
C22 10/16
C27 104
R136 NC
Q10
D5
C28 104
R137 473
A
B
1
2
3


IC2
MICROPROCESSOR
IC17
CT1
CHARACTER
IC18
IC16
IC14
IC19
IC10
IC9
D5V
+8R6V
+9R2V
-5V
-4R8V
A5V
+5R2VD
RAMS
AWC CNT
BUSY
SBT
STB
SBO
IRS R/A
GAMMA SW
FLD/FLM
VD RST
RXDIN
TXDOUT
SHUTT A
SYNC SW
SEL1
SEL2
SEL3
OE
CDATA
CCLK
S2
S1
SON
REN
WEN
S1N
CLK
LD
SW1
BT1
X1
Q9
Q10
Q11
Q12
Q13
Q15
Q16
Q17
Q18
Q19
Q20
Q21
D3
D4
D5
D6
D7
D8
D10
L1
L2
L3
L4
3
4
5
6

# CONDUCTOR VIEW OF SYSTEM CONTROL BOARD (WV-E550E)

**< Index>**
**SYSTEM CONTROL BOARD**

| | |
|---|---|
| IC1 | B2 |
| IC2 | B2 |
| IC3 | B2 |
| IC4 | A1 |
| IC5 | B5 |
| IC6 | B6 |
| IC7 | B5 |
| IC8 | B5 |
| IC9 | C5 |
| IC10 | C6 |
| IC12 | A3 |
| IC13 | A3 |
| IC14 | B6 |
| IC15 | A1 |
| IC16 | B6 |
| IC17 | B6 |
| IC18 | C5 |
| IC19 | A4 |
| Q1 | B5 |
| Q2 | B5 |
| Q9 | C6 |
| Q10 | C6 |
| Q11 | C1 |
| Q12 | B6 |
| Q13 | B6 |
| Q14 | A1 |
| Q15 | A1 |
| Q16 | B2 |
| Q17 | B2 |
| Q18 | A2 |
| Q19 | A2 |
| Q20 | A2 |
| Q21 | A2 |
| D1 | B6 |
| D3 | C6 |
| D4 | C6 |
| D5 | C6 |
| D6 | C1 |
| D7 | C2 |
| D8 | C2 |
| D9 | A1 |
| D10 | B6 |


SYSTEM CONTROL BOARD
SYSTEM CONTROL BOARD
C
B
A
1
2
3
4
5
6
IC1
IC2
IC3
IC4
CN4
CN5
CN6
VRCE550P2A
SYSCON
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
BT1
IC5
IC6
IC7
IC8
IC14
IC16
IC17
IC18
CN1
CN2
CN3
VRCE550P2A
SYSCON
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE VIEW)

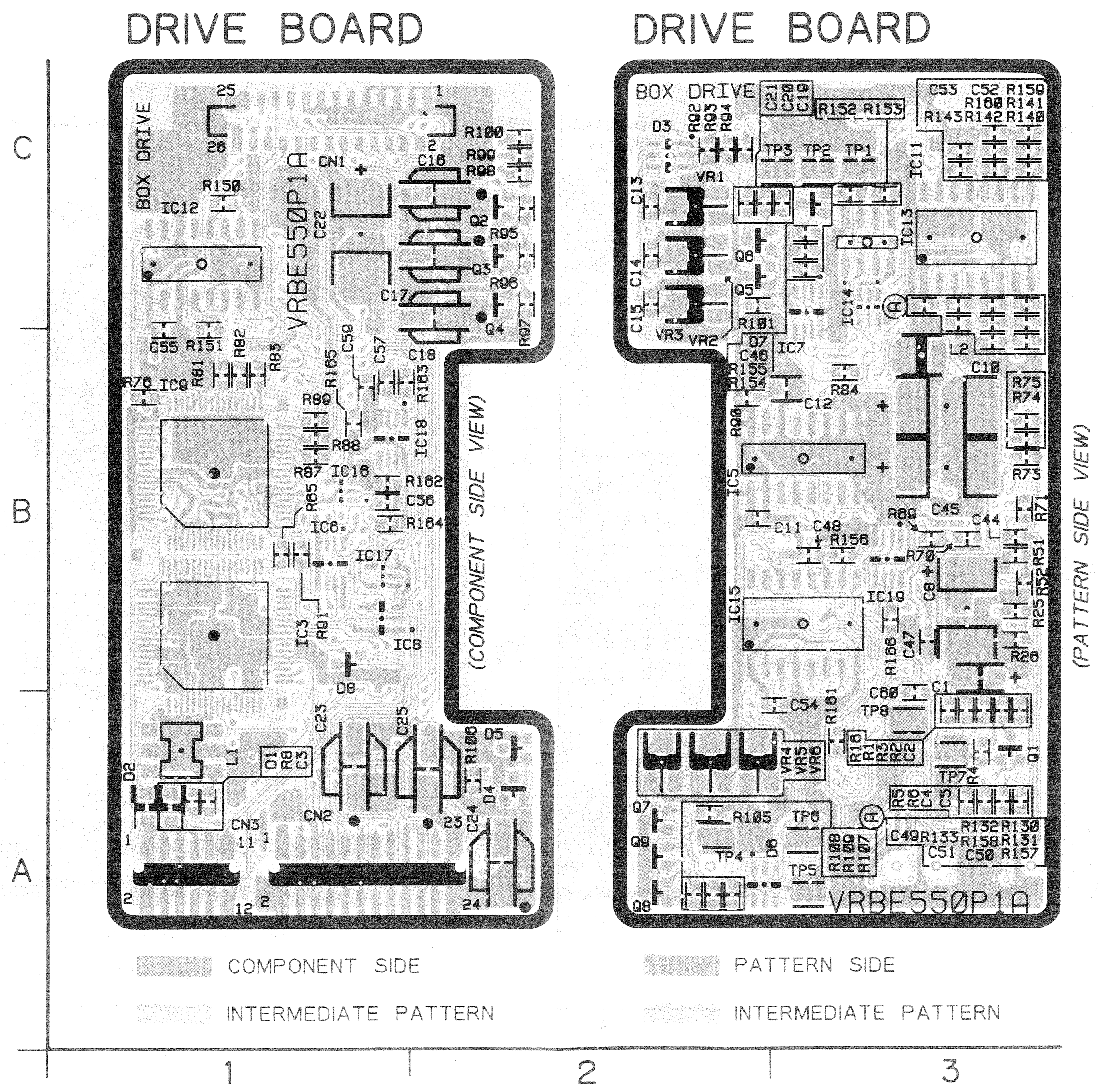
WV-E550E
WV-PS550

# CONDUCTOR VIEW OF DRIVE BOARD (WV-E550E)

< Index>

**DRIVE BOARD**

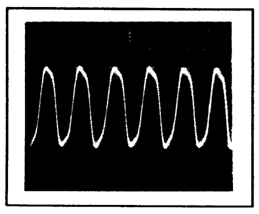
| | |
|---|---|
| IC3 | B1 |
| IC7 | C3 |
| IC8 | B1 |
| IC9 | B1 |
| IC11 | C3 |
| IC12 | C1 |
| IC15 | B3 |
| IC16 | B1 |
| IC17 | B1 |
| IC18 | B1 |
| IC19 | B3 |
| Q1 | A3 |
| Q2 | C2 |
| Q3 | C2 |
| Q4 | C2 |
| Q5 | C2 |
| Q6 | C2 |
| Q7 | A2 |
| Q8 | A2 |
| Q9 | A2 |
| D1 | A1 |
| D2 | A1 |
| D3 | C2 |
| D4 | A2 |
| D5 | A2 |
| D6 | A2 |
| D7 | C3 |
| D8 | B1 |


DRIVE BOARD
DRIVE BOARD
C
B
A
1
2
3
BOX DRIVE
VRBE550P1A
(COMPONENT SIDE VIEW)
(PATTERN SIDE VIEW)
CN1
CN2
CN3
IC3
IC6
IC8
IC9
IC12
IC16
IC17
IC18
IC5
IC7
IC11
IC13
IC14
IC15
IC19
VR1
VR2
VR3
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
COMPONENT SIDE
INTERMEDIATE PATTERN
PATTERN SIDE
INTERMEDIATE PATTERN

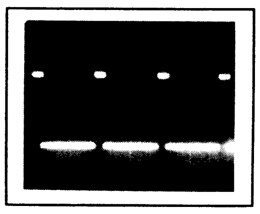
# SCHEMATIC DIAGRAM OF DRIVE

**DRIVE BOARD**

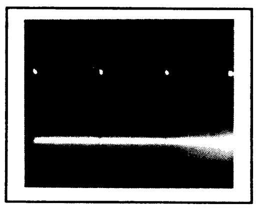
1. 20nsec/DIV 0.5V/DIV



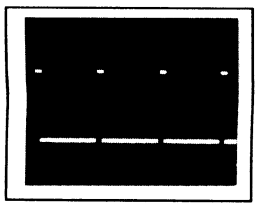
2. 20nsec/DIV 1V/DIV



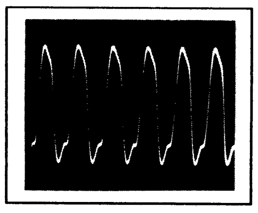
3. 5msec/DIV 1V/DIV



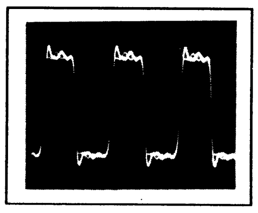
4. 20µsec/DIV 1V/DIV



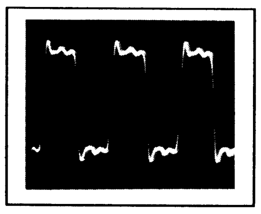
5. 20µsec/DIV 1V/DIV



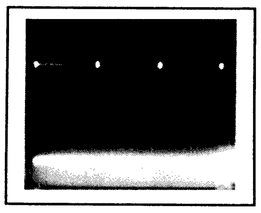
6. 20nsec/DIV 1V/DIV



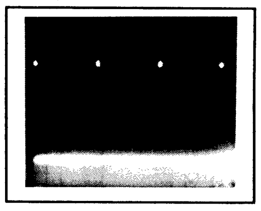
7. 20nsec/DIV 1V/DIV



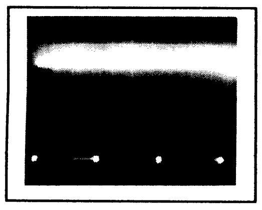
8. 20µsec/DIV 1V/DIV



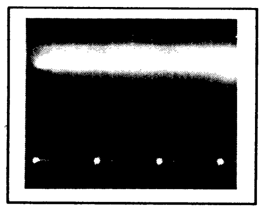
9. 20µsec/DIV 1V/DIV



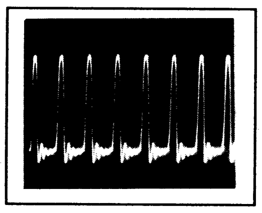
10. 20µsec/DIV 1V/DIV



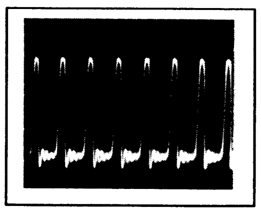
11. 20µsec/DIV 1V/DIV



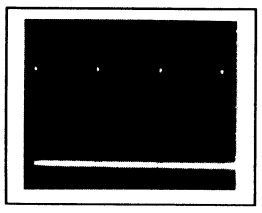
12. 50nsec/DIV 1V/DIV



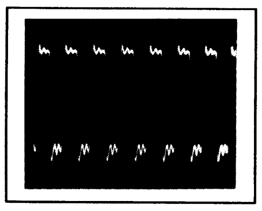
13. 50nsec/DIV 1V/DIV



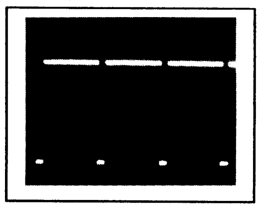
14. 20µsec/DIV 1V/DIV



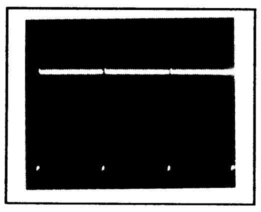
15. 50nsec/DIV 1V/DIV

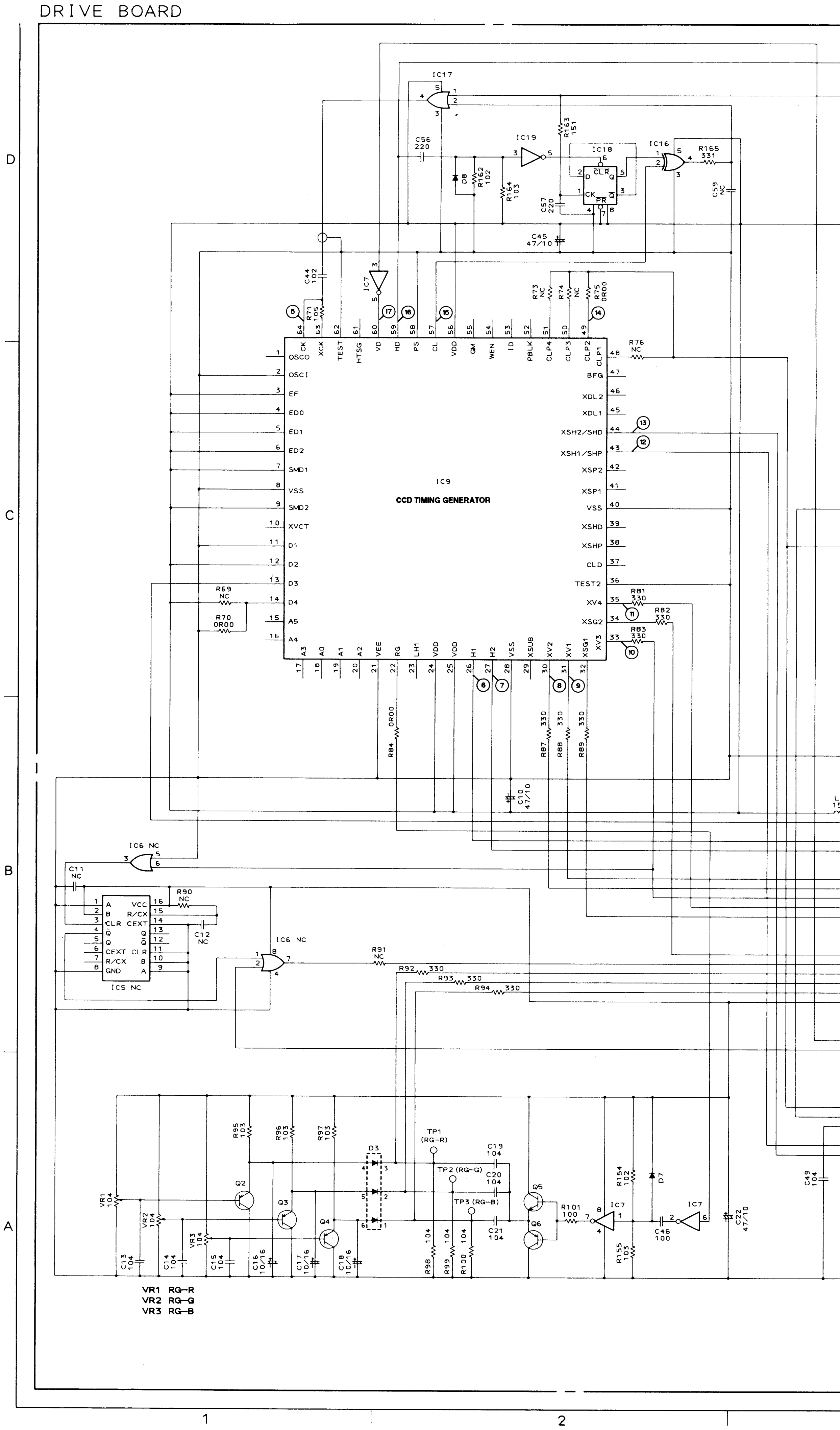


16. 20µsec/DIV 1V/DIV



17. 5msec/DIV 1V/DIV





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## DRIVE BOARD

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| IC9 | C2 |
| IC11 | A3, A4 |
| IC12 | B5, C6 |
| IC15 | A4, B4, C5 |
| IC16 | D2 |
| IC17 | D2 |
| IC18 | D2 |
| IC19 | C3, D2, D3 |
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| Q2 | A1 |
| Q3 | A1 |
| Q4 | A1 |
| Q5 | A2 |
| Q6 | A2 |
| Q7 | A5 |
| Q8 | A5 |
| Q9 | A5 |
| D1 | D3 |
| D2 | D4 |
| D3 | A1 |
| D4 | A5 |
| D5 | A5 |
| D6 | A6 |
| D7 | A2 |
| D8 | D2 |

**DRIVE BOARD**

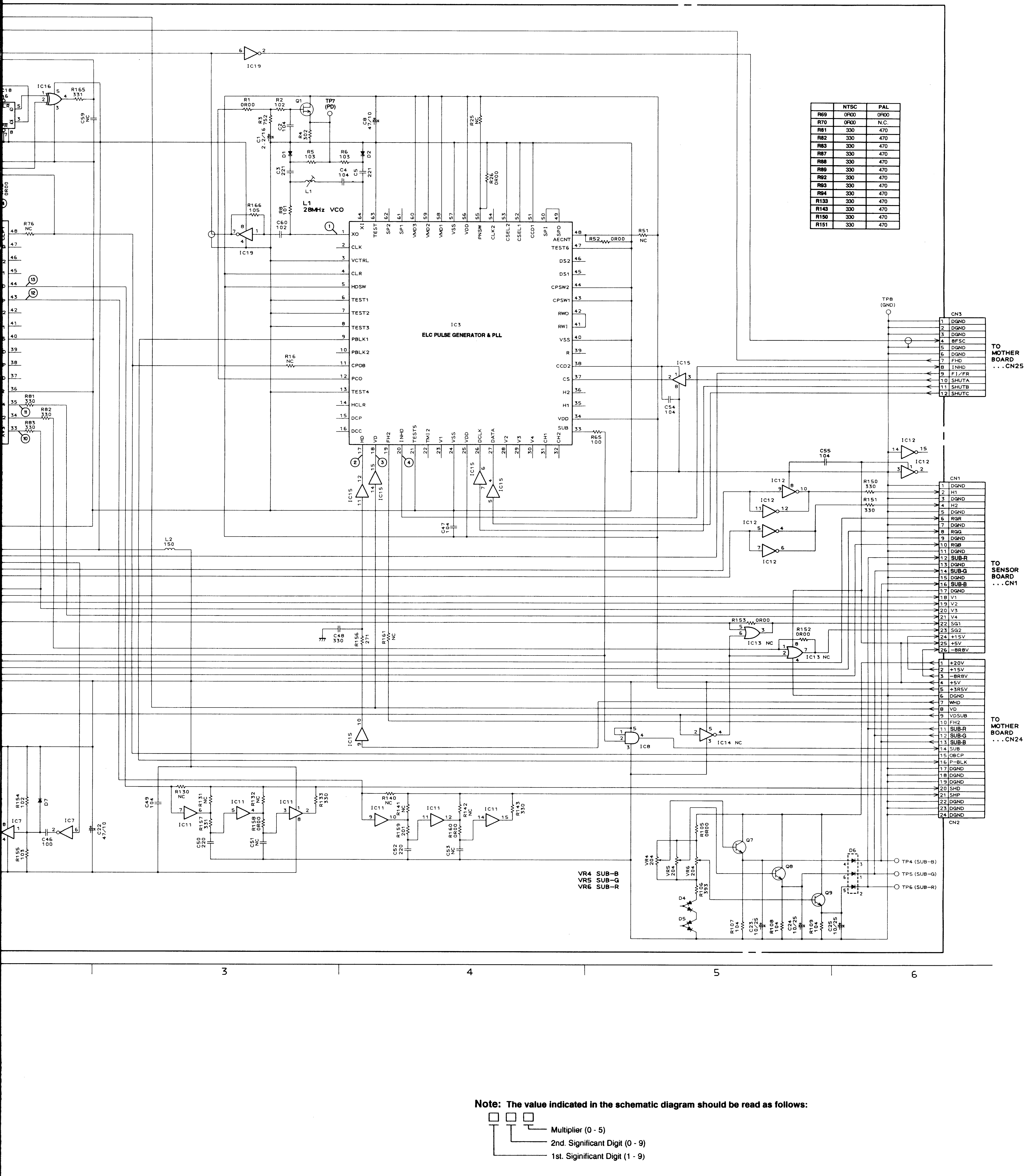
| | IC3 | IC9 |
|---|---|---|
| Pin 1 | 1.7 | 4.7 |
| 2 | 1.7 | 0 |
| 3 | 0 | 4.7 |
| 4 | 3.5 | 4.7 |
| 5 | 3.5 | 4.7 |
| 6 | 0 | 4.8 |
| 7 | 0 | 4.6 |
| 8 | 0 | 0 |
| 9 | 0.7 | 4.7 |
| 10 | 0.6 | 4.6 |
| 11 | 0 | 0 |
| 12 | 1.8 | 4.7 |
| 13 | 0 | 0 |
| 14 | 0.1 | 0 |
| 15 | 0.1 | 1.4 |
| 16 | 0.5 | 1.8 |
| 17 | 0.1 | 1.2 |
| 18 | 3.6 | 1.4 |
| 19 | 0 | 1.4 |
| 20 | 3.5 | 1.4 |
| 21 | 3.2 | 0 |
| 22 | 3.2 | 1.3 |
| 23 | 0 | 4.8 |
| 24 | 3.5 | 4.8 |
| 25 | 3.4 | 4.7 |
| 26 | 3.4 | 2.5 |
| 27 | 2.5 | 2.2 |
| 28 | 3.3 | 0 |
| 29 | 0.1 | 4.7 |
| 30 | 3.5 | 0.2 |
| 31 | 3.5 | 0.1 |
| 32 | 3.4 | 4.7 |

| | IC3 | IC9 |
|---|---|---|
| Pin 33 | 3.4 | 4.5 |
| 34 | 3.5 | 4.8 |
| 35 | 1.9 | 4.5 |
| 36 | 1.6 | 0 |
| 37 | 0 | 2.2 |
| 38 | 3.5 | 3.5 |
| 39 | 3.2 | 3.5 |
| 40 | 0 | 0 |
| 41 | 1.8 | 4.7 |
| 42 | 1.8 | 4.7 |
| 43 | 0 | 1.0 |
| 44 | 0 | 1.1 |
| 45 | 0.9 | 4.7 |
| 46 | 0.9 | 0 |
| 47 | 0 | 0 |
| 48 | 0 | 0.2 |
| 49 | 1.7 | 0.1 |
| 50 | 1.7 | 0.1 |
| 51 | 0 | 0.1 |
| 52 | 0 | 4.0 |
| 53 | 0 | 0 |
| 54 | 0 | 4.8 |
| 55 | 1.7 | 0 |
| 56 | 0 | 4.8 |
| 57 | 3.5 | 2.4 |
| 58 | 0 | 0 |
| 59 | 3.5 | 4.4 |
| 60 | 3.5 | 4.7 |
| 61 | 3.5 | 4.7 |
| 62 | 0.5 | 0 |
| 63 | 0 | 2.4 |
| 64 | 1.7 | 2.2 |

| | IC7 | IC8 | IC11 | IC12 | IC15 | IC16 | IC17 | IC18 | IC19 |
|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 4.7 | 4.9 | 4.8 | 4.9 | 3.5 | 2.3 | 2.2 | 2.3 | 2.3 |
| 2 | 1.3 | 3.4 | 1.1 | 4.9 | 3.5 | 2.4 | 2.4 | 2.4 | 2.4 |
| 3 | 0.6 | 0 | 1.1 | 1.2 | 4.9 | 0 | 0 | 2.4 | 2.4 |
| 4 | 4.8 | 4.8 | 1.1 | 2.6 | 3.4 | 0 | 3.3 | 0 | 0 |
| 5 | 4.2 | 4.9 | 1.2 | 2.3 | 4.8 | 4.8 | 4.8 | 2.4 | 2.4 |
| 6 | 3.4 | | 1.2 | 2.6 | 3.4 | | | 4.9 | 2.4 |
| 7 | 0.2 | | 1.1 | 2.3 | 5.0 | | | 4.9 | 2.4 |
| 8 | 0 | | 0 | 0 | 0 | | | 4.9 | 4.9 |
| 9 | | | 1.0 | 2.6 | 0.7 | | | | |
| 10 | | | 1.1 | 2.3 | 0.5 | | | | |
| 11 | | | 1.1 | 2.5 | 0.5 | | | | |
| 12 | | | 1.1 | 2.2 | 0.5 | | | | |
| 13 | | | - | - | 1.6 | | | | |
| 14 | | | 1.1 | 0 | 0.2 | | | | |
| 15 | | | 1.1 | 4.8 | 0.1 | | | | |
| 16 | | | - | - | - | | | | |

| | B | C | E |
|---|---|---|---|
| Q1 | (G) 1.8 | (D) 3.5 | (S) 2.1 |
| 2 | 1.1 | 0 | 0.5 |
| 3 | 3.4 | 0 | 2.8 |
| 4 | 3.5 | 0 | 2.9 |
| 5 | 0.6 | 4.8 | 0.5 |
| 6 | 0.6 | 1.6 | 0.5 |
| 7 | 13.3 | 18.6 | 12.8 |
| 8 | 13.7 | 18.6 | 13.2 |
| 9 | 13.9 | 18.6 | 13.4 |

# M OF DRIVE BOARD (WV-E550E)


IC3
ELC PULSE GENERATOR & PLL
L1
28MHz VCO
TP7 (PD)
TP8 (GND)
XO
XI
CLK
VCTRL
CLR
HDSW
TEST1
TEST2
TEST3
PBLK1
PBLK2
CPOB
PCO
TEST4
HCLR
DCP
DCC
HD
VD
FH2
INHD
TEST5
TMI2
V1
VSS
VDD
DCLK
DATA
V2
V3
V4
CH1
CH2
SUB
H1
H2
CS
CCD2
R
RWI
RWO
CPSW1
CPSW2
DS1
DS2
TEST6
AECNT
SPO
SPI
CCD1
CSEL1
CSEL2
CLK2
PNSW
VMD1
VMD2
VMD3
SP1
SP2
TEST
IC7
IC8
IC11
IC12
IC13 NC
IC14 NC
IC15
IC16
IC19
Q1
Q7
Q8
Q9
D1
D2
D4
D5
D6
D7
VR4 SUB-B
VR5 SUB-G
VR6 SUB-R
TP4 (SUB-B)
TP5 (SUB-G)
TP6 (SUB-R)
CN3
DGND
BFSC
FHD
INHD
FI/FR
SHUTA
SHUTB
SHUTC
TO MOTHER BOARD ...CN25
CN1
RGR
RGG
RGB
SUB-R
SUB-G
SUB-B
SG1
SG2
+15V
+5V
-BRBV
TO SENSOR BOARD ...CN1
CN2
+20V
+3RSV
WHD
VDSUB
OBCP
P-BLK
SHD
SHP
TO MOTHER BOARD ...CN24
3
4
5
6

|  | NTSC | PAL |
|---|---|---|
| R69 | 0R00 | 0R00 |
| R70 | 0R00 | N.C. |
| R81 | 330 | 470 |
| R82 | 330 | 470 |
| R83 | 330 | 470 |
| R87 | 330 | 470 |
| R88 | 330 | 470 |
| R89 | 330 | 470 |
| R92 | 330 | 470 |
| R93 | 330 | 470 |
| R94 | 330 | 470 |
| R133 | 330 | 470 |
| R143 | 330 | 470 |
| R150 | 330 | 470 |
| R151 | 330 | 470 |

**Note:** **The value indicated in the schematic diagram should be read as follows:**

☐ ☐ ☐
Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

**<Example>**

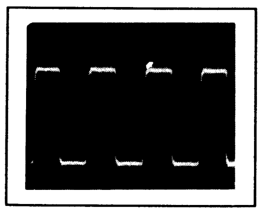
For Resistor:
330 → 33 x $10^0$ = 33 Ω
561 → 56 x $10^1$ = 560 Ω
123 → 12 x $10^3$ = 12k Ω
0R00 = 0 Ω

For Capacitor:
820 → 82 x $10^0$ = 82 pF
102 → 10 x $10^2$ = 1000 pF = 0.001 μF
104 → 10 x $10^4$ = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

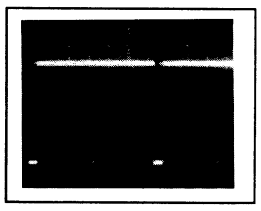
# SCHEMATIC DIAGRAM OF SYNC

## SYNC BOARD

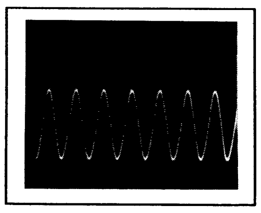
1. 0.1µsec/DIV 1V/DIV



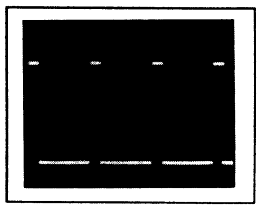
9. 10µsec/DIV 1V/DIV



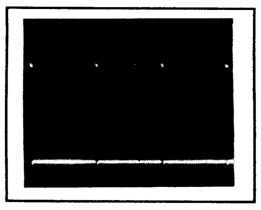
2. 50nsec/DIV 1V/DIV



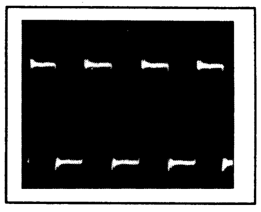
10. 20µsec/DIV 1V/DIV



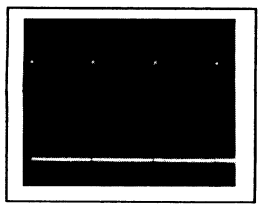
3. 5msec/DIV 1V/DIV



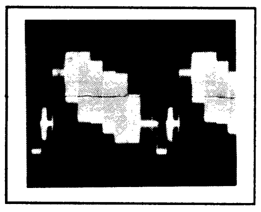
11. 0.1µsec/DIV 1V/DIV



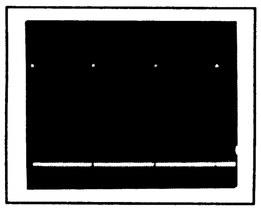
4. 20µsec/DIV 1V/DIV



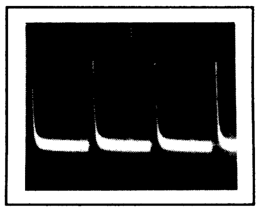
12. 10µsec/DIV 0.2V/DIV



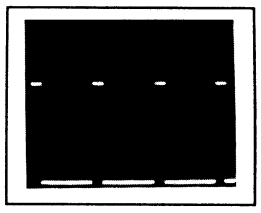
5. 20µsec/DIV 1V/DIV



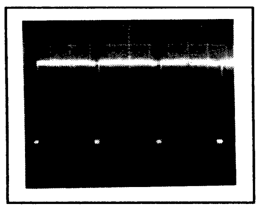
13. 20µsec/DIV 0.1V/DIV



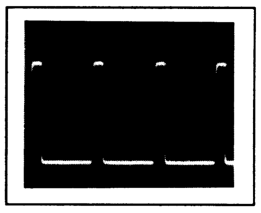
6. 20µsec/DIV 1V/DIV



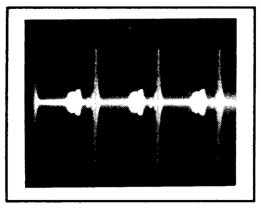
14. 20µsec/DIV 1V/DIV



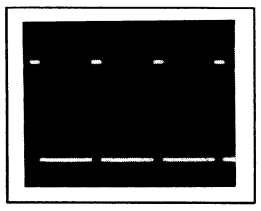
7. 20µsec/DIV 1V/DIV



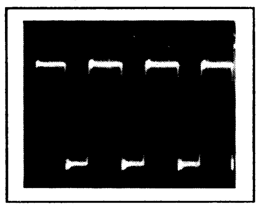
15. 20µsec/DIV 0.5V/DIV

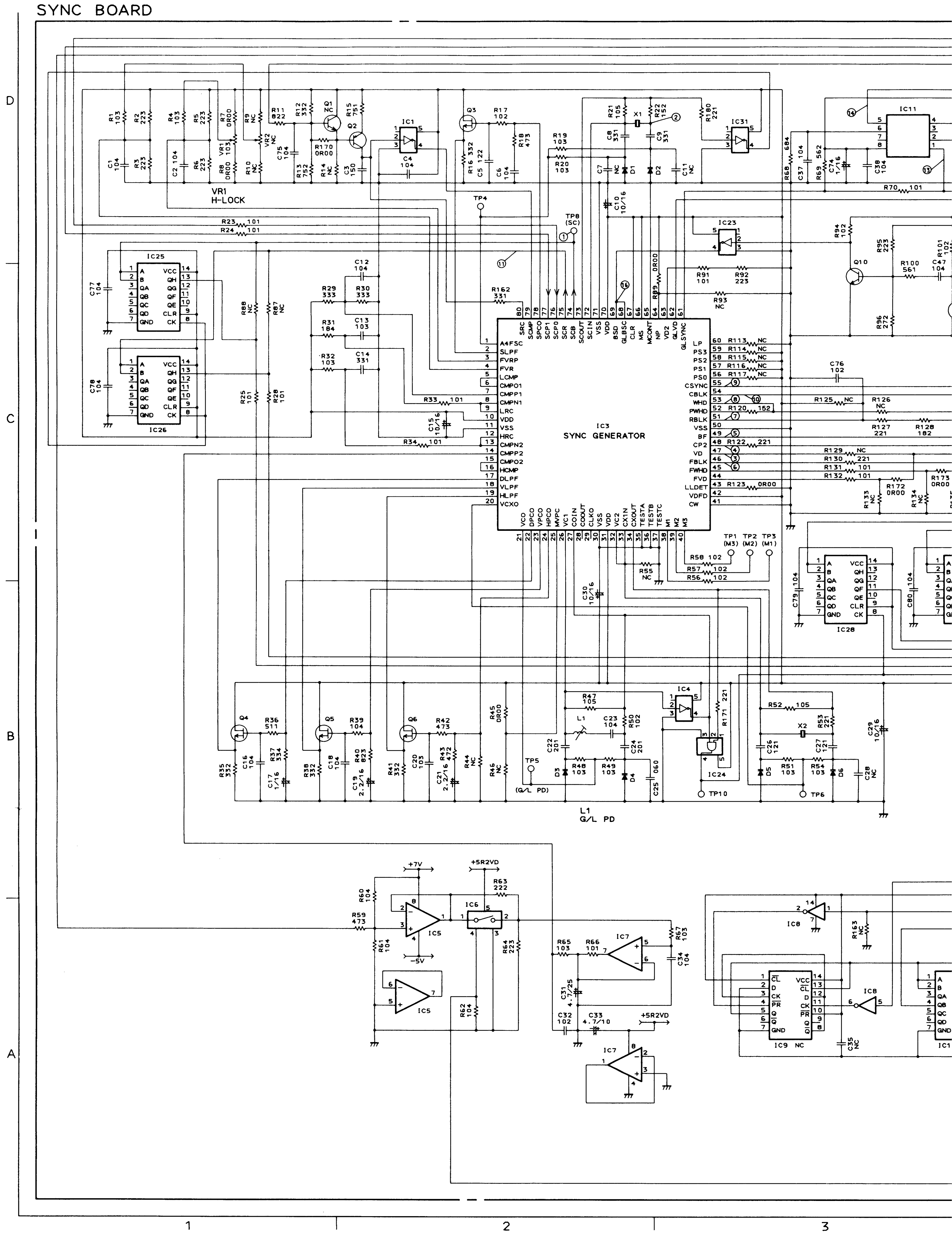


8. 20µsec/DIV 1V/DIV



16. 0.1µsec/DIV 1V/DIV





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### SYNC BOARD

| | | | |
|---|---|---|---|
| IC1 | D2 | Q2 | D2 |
| IC3 | C2 | Q3 | D2 |
| IC4 | B3 | Q4 | B1 |
| IC5 | A2 | Q5 | B1 |
| IC6 | A2 | Q6 | B2 |
| IC7 | A2 | Q7 | D4 |
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| IC11 | D3 | Q9 | D5 |
| IC12 | D4 | Q10 | C3 |
| IC13 | C5 | Q13 | C3 |
| IC14 | C5,C6 | Q15 | C5 |
| IC15 | C6 | Q16 | C5 |
| IC23 | D3 | Q17 | C5 |
| IC24 | B3 | D1 | D2 |
| IC25 | C1 | D2 | D2 |
| IC26 | C1 | D3 | B2 |
| IC27 | B4,C4 | D4 | B2 |
| IC28 | B3 | D5 | B3 |
| IC29 | B3 | D6 | B3 |
| IC30 | B4 | D8 | C6 |
| IC31 | D3 | | |

**SYNC BOARD**

| | IC1 | IC4 | IC5 | IC13 |
|---|---|---|---|---|
| Pin 1 | - | 1.3 | 3.1 | 2.7 |
| 2 | 0.4 | 0 | 3.1 | 2.7 |
| 3 | 0 | 0 | 3.1 | 0 |
| 4 | 5.0 | 5.0 | -5.2 | 6.3 |
| 5 | 5.0 | 5.0 | 0 | 6.7 |
| 6 | | | 0 | |
| 7 | | | 0 | |
| 8 | | | 7.0 | |

| | IC3 |
|---|---|
| Pin 1 | 2.5 |
| 2 | 0.5 |
| 3 | 2.5 |
| 4 | 2.5 |
| 5 | 5.0 |
| 6 | 5.0 |
| 7 | 2.5 |
| 8 | 0 |
| 9 | 0 |
| 10 | 5.0 |
| 11 | 0 |
| 12 | 0.2 |
| 13 | 0.2 |
| 14 | 2.8 |
| 15 | 4.9 |
| 16 | 4.9 |
| 17 | - |
| 18 | 0.4 |
| 19 | 4.8 |
| 20 | - |

| | IC3 |
|---|---|
| Pin 41 | 0 |
| 42 | 5.0 |
| 43 | 0 |
| 44 | 0.2 |
| 45 | 0.8 |
| 46 | 1.2 |
| 47 | 0.2 |
| 48 | 0.2 |
| 49 | 0.2 |
| 50 | 0 |
| 51 | 1.1 |
| 52 | 0.7 |
| 53 | 0.7 |
| 54 | 1.2 |
| 55 | 4.6 |
| 56 | 4.9 |
| 57 | 4.9 |
| 58 | 4.9 |
| 59 | 4.9 |
| 60 | 0 |

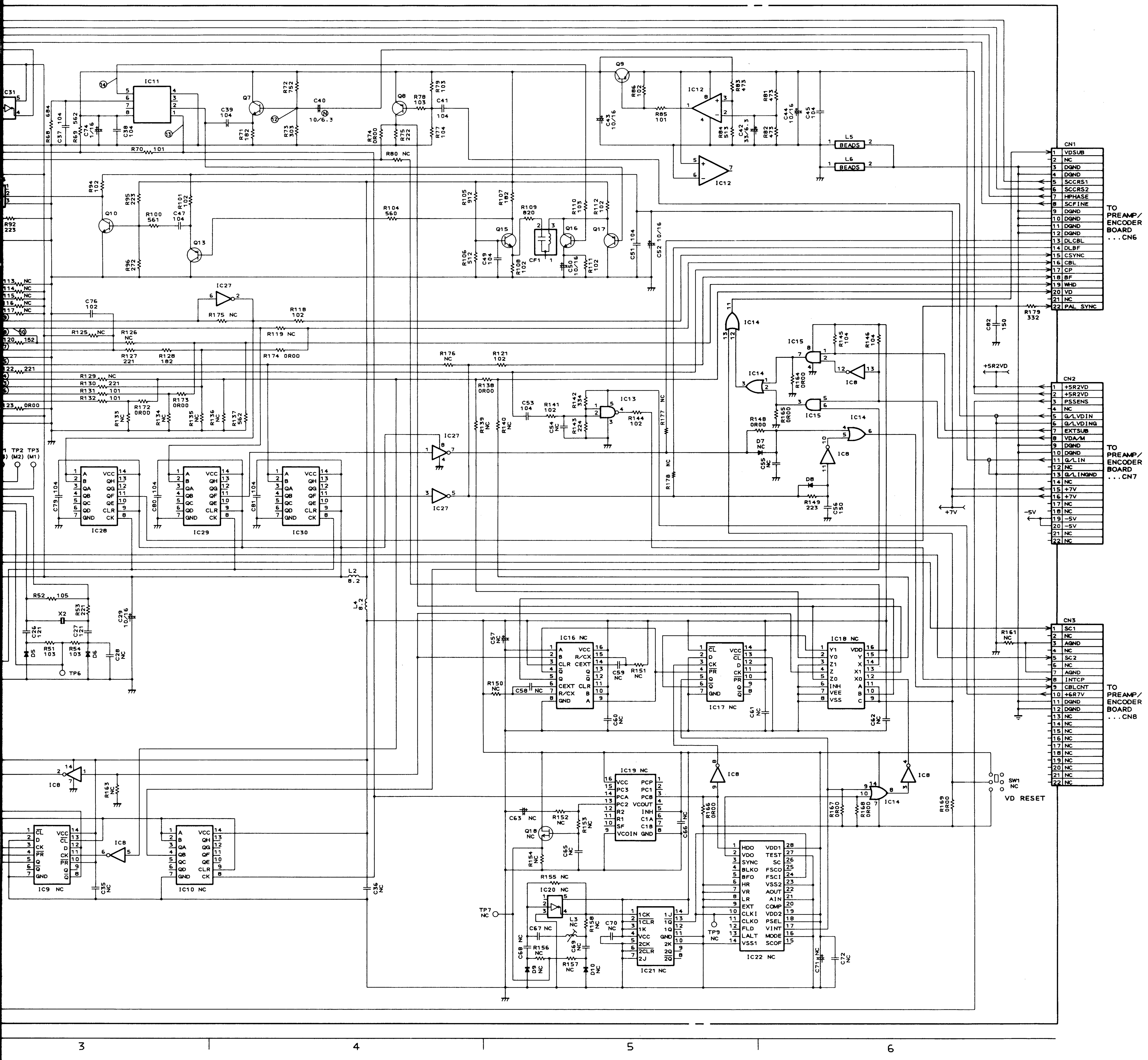
| | IC3 |
|---|---|
| 21 | · |
| 22 | 0 |
| 23 | 0 |
| 24 | 5.0 |
| 25 | 5.0 |
| 26 | 0 |
| 27 | 5.0 |
| 28 | 0 |
| 29 | 2.4 |
| 30 | 0 |
| 31 | 5.0 |
| 32 | 0 |
| 33 | 0 |
| 34 | 5.0 |
| 35 | 0 |
| 36 | 0 |
| 37 | 0 |
| 38 | 0 |
| 39 | 0 |
| 40 | 0 |

| | IC3 |
|---|---|
| 61 | 0.2 |
| 62 | 0.4 |
| 63 | 0 |
| 64 | 0 |
| 65 | 0 |
| 66 | 5.0 |
| 67 | 5.0 |
| 68 | 0 |
| 69 | 0 |
| 70 | 5.0 |
| 71 | 0 |
| 72 | 2.4 |
| 73 | 2.6 |
| 74 | 2.4 |
| 75 | 2.4 |
| 76 | 5.0 |
| 77 | 0 |
| 78 | - |
| 79 | 5.0 |
| 80 | 0 |

| | IC6 | IC7 | IC8 | IC11 | IC12 | IC14 | IC23 | IC24 |
|---|---|---|---|---|---|---|---|---|
| Pin 1 | 3.1 | 4.5 | 0 | 0.1 | 4.4 | 0 | - | 1.1 |
| 2 | 2.8 | 4.5 | 5.0 | 1.5 | 2.6 | 0 | 5.7 | 5.0 |
| 3 | 0 | 0 | 0 | 0 | 2.6 | 0 | 0 | 0 |
| 4 | 0 | 0 | 5.0 | 0 | 0 | 4.0 | 0 | 0 |
| 5 | 5.2 | 2.8 | 0.2 | 3.9 | 5.2 | 0.2 | 5.0 | 5.0 |
| 6 | | 2.8 | 4.8 | 1.3 | 0 | 4.0 | | |
| 7 | | 2.8 | 0 | 5.0 | 4.0 | 0 | | |
| 8 | | 5.2 | 5.0 | 5.0 | 5.2 | 0 | | |
| 9 | | | 0 | | | 0 | | |
| 10 | | | 0.2 | | | 0 | | |
| 11 | | | 4.1 | | | 0 | | |
| 12 | | | 0 | | | 0 | | |
| 13 | | | 4.9 | | | 0 | | |
| 14 | | | 5.0 | | | 5.0 | | |

| | B | C |
|---|---|---|
| Q2 | 3.3 | 0.4 |
| 3 | (G) 0.8 | (D) 5.0 |
| 5 | (G) 0 | (D) 5.0 |
| 6 | (G) 4.9 | (D) 4.9 |
| 7 | 3.9 | 5.0 |
| 8 | 4.5 | 0.4 |
| 9 | 4.5 | 5.0 |
| 10 | 0.6 | 5.8 |
| 13 | 1.9 | 2.1 |
| 15 | 1.7 | 3.2 |
| 16 | 2.8 | 2.2 |
| 17 | 1.5 | 0 |

# M OF SYNC BOARD (WV-E550E)


IC8
IC9 NC
IC10 NC
IC11
IC12
IC13
IC14
IC15
IC16 NC
IC17 NC
IC18 NC
IC19 NC
IC20 NC
IC21 NC
IC22 NC
IC27
IC28
IC29
IC30
Q7
Q8
Q9
Q10
Q13
Q15
Q16
Q17
Q18
CF1
X2
L2 8.2
L4 8.2
L5 BEADS
L6 BEADS
TP2 (M2)
TP3 (M1)
TP6
TP7 NC
TP9 NC
SW1 NC
VD RESET
+5R2VD
+7V
-5V
CN1
1 VDSUB
2 NC
3 DGND
4 DGND
5 SCCRS1
6 SCCRS2
7 HPHASE
8 SCFINE
9 DGND
10 DGND
11 DGND
12 DGND
13 DLCBL
14 DLBF
15 CSYNC
16 CBL
17 CP
18 BF
19 WHD
20 VD
21 NC
22 PAL SYNC
TO PREAMP/ ENCODER BOARD ...CN6
CN2
1 +5R2VD
2 +5R2VD
3 PSSENS
4 NC
5 G/LVDIN
6 G/LVDING
7 EXTSUB
8 VDA/M
9 DGND
10 DGND
11 G/LIN
12 NC
13 G/LINGND
14 NC
15 +7V
16 +7V
17 NC
18 NC
19 -5V
20 -5V
21 NC
22 NC
TO PREAMP/ ENCODER BOARD ...CN7
CN3
1 SC1
2 NC
3 AGND
4 NC
5 SC2
6 NC
7 AGND
8 INTCP
9 CBLCNT
10 +6R7V
11 DGND
12 DGND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
TO PREAMP/ ENCODER BOARD ...CN8
3
4
5
6

| 12 | IC14 | IC23 | IC24 |
|---|---|---|---|
| .4 | 0 | - | 1.1 |
| .6 | 0 | 5.7 | 5.0 |
| .6 | 0 | 0 | 0 |
| 0 | 4.0 | 0 | 0 |
| .2 | 0.2 | 5.0 | 5.0 |
| 0 | 4.0 | | |
| .0 | 0 | | |
| .2 | 0 | | |
| | 0 | | |
| | 0 | | |
| | 0 | | |
| | 0 | | |
| | 0 | | |
| | 5.0 | | |

| | B | C | E |
|---|---|---|---|
| Q2 | 3.3 | 0.4 | 3.9 |
| 3 | (G) 0.8 | (D) 5.0 | (S) 0.5 |
| 5 | (G) 0 | (D) 5.0 | (S) 0.4 |
| 6 | (G) 4.9 | (D) 4.9 | (S) 4.8 |
| 7 | 3.9 | 5.0 | 3.3 |
| 8 | 4.5 | 0.4 | 5.0 |
| 9 | 4.5 | 5.0 | 5.2 |
| 10 | 0.6 | 5.8 | 0 |
| 13 | 1.9 | 2.1 | 3.9 |
| 15 | 1.7 | 3.2 | 1.0 |
| 16 | 2.8 | 2.2 | 0.9 |
| 17 | 1.5 | 0 | 2.2 |

**Note:** **The value indicated in the schematic diagram should be read as follows:**

☐ ☐ ☐

- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Significant Digit (1 - 9)

**<Example>**

For Resistor:

330 → $33 \times 10^0$ = 33 Ω
561 → $56 \times 10^1$ = 560 Ω
123 → $12 \times 10^3$ = 12k Ω
0R00 = 0 Ω

For Capacitor:

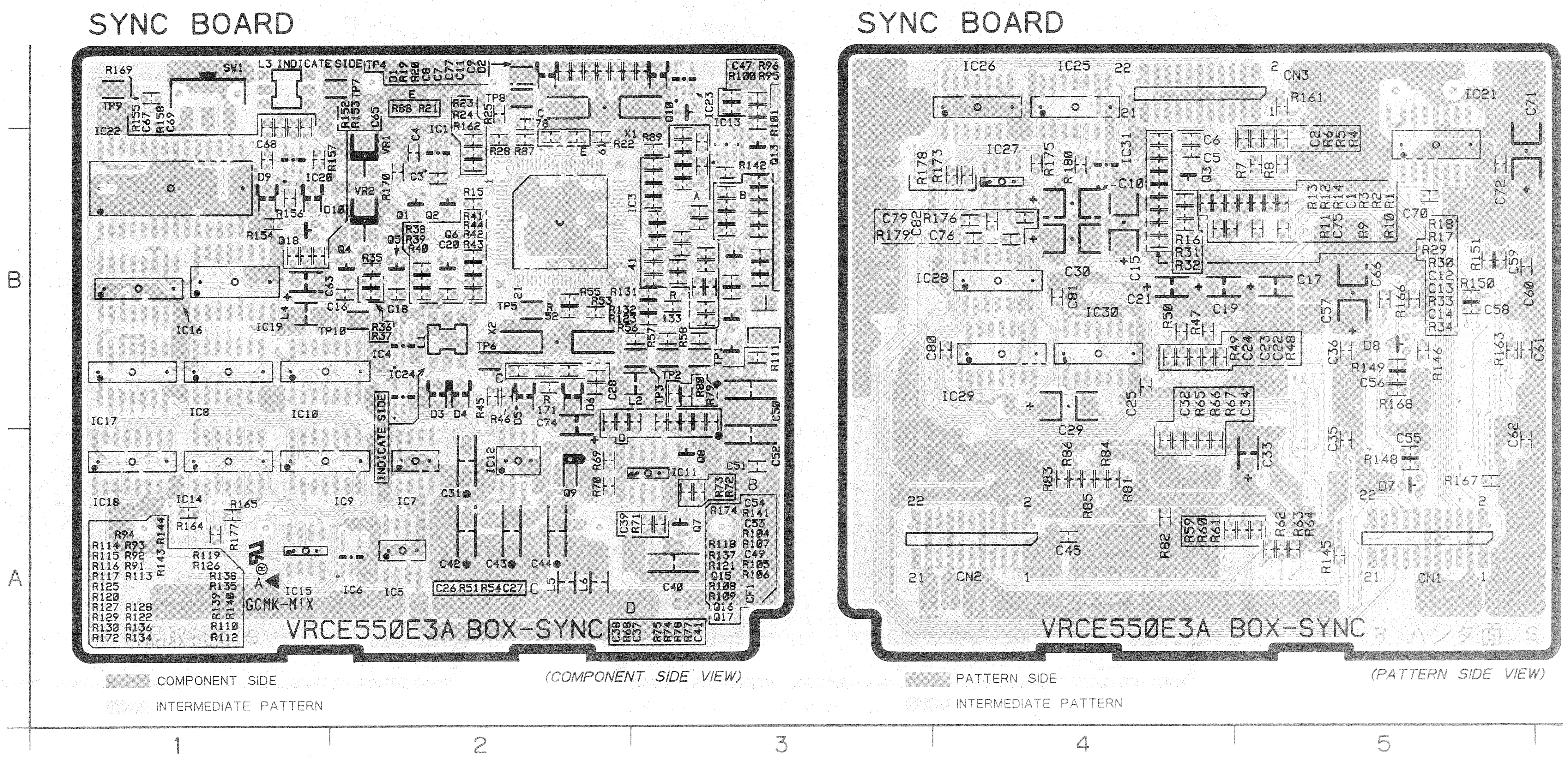
820 → $82 \times 10^0$ = 82 pF
102 → $10 \times 10^2$ = 1000 pF = 0.001 μF
104 → $10 \times 10^4$ = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

# CONDUCTOR VIEW OF SYNC BOARD (WV-E550E)

< Index>

**SYNC BOARD**

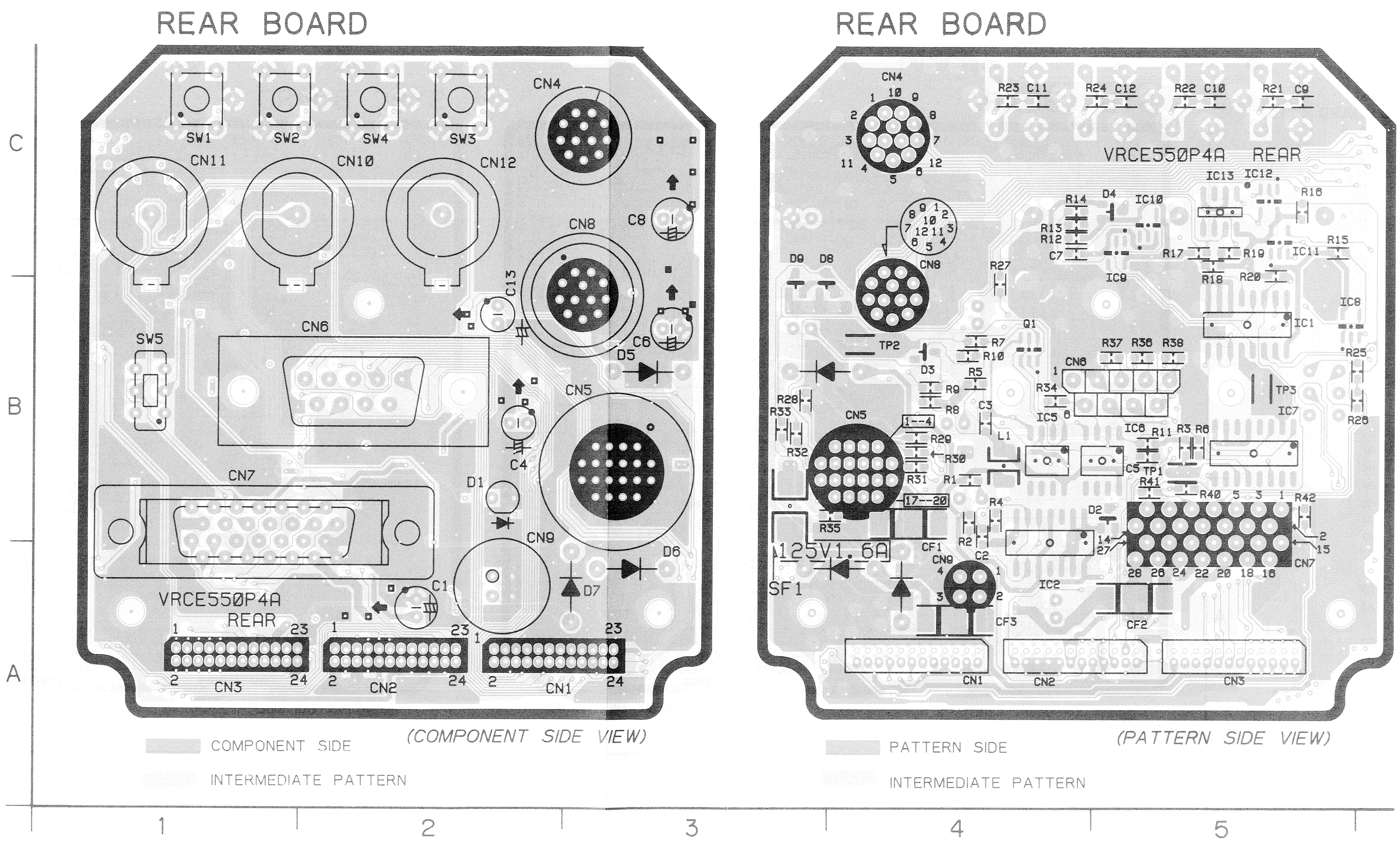
| | |
|---|---|
| IC1 | B2 |
| IC3 | B2 |
| IC4 | B2 |
| IC5 | A2 |
| IC6 | A2 |
| IC7 | A2 |
| IC8 | B1 |
| IC11 | A3 |
| IC12 | A2 |
| IC13 | B3 |
| IC14 | A1 |
| IC15 | A1 |
| IC23 | C3 |
| IC24 | B2 |
| IC25 | C4 |
| IC26 | C4 |
| IC27 | B4 |
| IC28 | B4 |
| IC29 | B4 |
| IC30 | B4 |
| IC31 | B4 |
| Q2 | B2 |
| Q3 | B4 |
| Q4 | B2 |
| Q5 | B2 |
| Q6 | B2 |
| Q7 | A3 |
| Q8 | A3 |
| Q9 | A2 |
| Q10 | C3 |
| Q13 | B3 |
| Q15 | B3 |
| Q16 | B3 |
| Q17 | B3 |
| D1 | C2 |
| D2 | C3 |
| D3 | B2 |
| D4 | B2 |
| D5 | B2 |
| D6 | B2 |
| D8 | B5 |


SYNC BOARD
SYNC BOARD
VRCE550E3A BOX-SYNC
VRCE550E3A BOX-SYNC
L3 INDICATE SIDE
INDICATE SIDE
GCMK-MIX
CN1
CN2
CN3
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE VIEW)
B
A
1
2
3
4
5

# CONDUCTOR VIEW OF REAR BOARD (WV-E550E)

< Index>
**REAR BOARD**

| | |
|---|---|
| IC1 | B5 |
| IC2 | A4 |
| IC5 | B4 |
| IC6 | B5 |
| IC7 | B5 |
| IC8 | B5 |
| IC9 | C5 |
| IC10 | C5 |
| IC11 | C5 |
| IC12 | C5 |
| IC13 | C5 |
| Q1 | B4 |
| D1 | B2 |
| D2 | B5 |
| D3 | B4 |
| D4 | C4 |
| D5 | B3 |
| D6 | A3 |
| D7 | A3 |
| D8 | B3 |
| D9 | B3 |


REAR BOARD
REAR BOARD
C
B
A
1
2
3
4
5
SW1
SW2
SW4
SW3
SW5
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
CN9
CN10
CN11
CN12
C1
C4
C6
C8
C13
D1
D5
D6
D7
VRCE550P4A
REAR
VRCE550P4A REAR
IC1
IC2
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
Q1
D2
D3
D4
D8
D9
TP1
TP2
TP3
L1
CF1
CF2
CF3
SF1
125V1.6A
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
R31
R32
R33
R34
R35
R36
R37
R38
R40
R41
R42
C2
C3
C5
C7
C9
C10
C11
C12
1--4
17--20
28 26 24 22 20 18 16

COMPONENT SIDE

INTERMEDIATE PATTERN

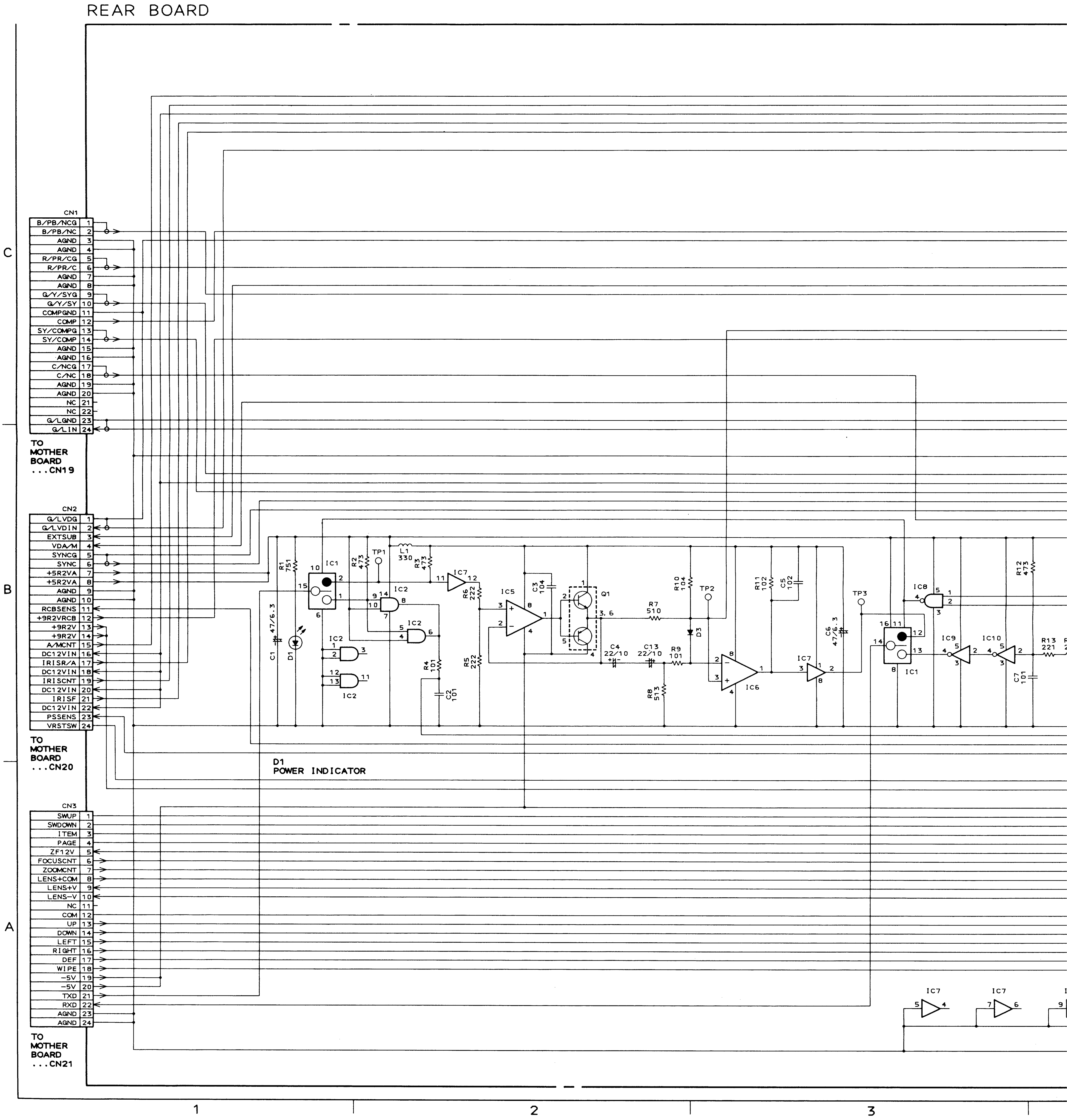
(COMPONENT SIDE VIEW)

PATTERN SIDE

INTERMEDIATE PATTERN

(PATTERN SIDE VIEW)

# SCHEMATIC DIAGRAM OF REAR


REAR BOARD
CN1
B/PB/NCG 1
B/PB/NC 2
AGND 3
AGND 4
R/PR/CG 5
R/PR/C 6
AGND 7
AGND 8
G/Y/SYG 9
G/Y/SY 10
COMPGND 11
COMP 12
SY/COMPG 13
SY/COMP 14
AGND 15
AGND 16
C/NCG 17
C/NC 18
AGND 19
AGND 20
NC 21
NC 22
G/LGND 23
G/LIN 24
TO MOTHER BOARD ...CN19
CN2
G/LVDG 1
G/LVDIN 2
EXTSUB 3
VDA/M 4
SYNCG 5
SYNC 6
+5R2VA 7
+5R2VA 8
AGND 9
AGND 10
RCBSENS 11
+9R2VRCB 12
+9R2V 13
+9R2V 14
A/MCNT 15
DC12VIN 16
IRISR/A 17
DC12VIN 18
IRISCNT 19
DC12VIN 20
IRISF 21
DC12VIN 22
PSSENS 23
VRSTSW 24
TO MOTHER BOARD ...CN20
CN3
SWUP 1
SWDOWN 2
ITEM 3
PAGE 4
ZF12V 5
FOCUSCNT 6
ZOOMCNT 7
LENS+COM 8
LENS+V 9
LENS-V 10
NC 11
COM 12
UP 13
DOWN 14
LEFT 15
RIGHT 16
DEF 17
WIPE 18
-5V 19
-5V 20
TXD 21
RXD 22
AGND 23
AGND 24
TO MOTHER BOARD ...CN21
C
B
A
1
2
3
D1 POWER INDICATOR
C1 47/6.3
D1
R1 751
IC1
R2 473
TP1
L1 330
R3 473
IC7
IC2
R4 101
C2 101
R6 222
R5 222
IC5
C3 104
Q1
R7 510
C4 22/10
C13 22/10
R9 101
R8 513
R10 104
D3
TP2
IC6
R11 102
C5 102
C6 47/6.3
TP3
IC8
IC9
IC10
R12 473
R13 221
C7 101

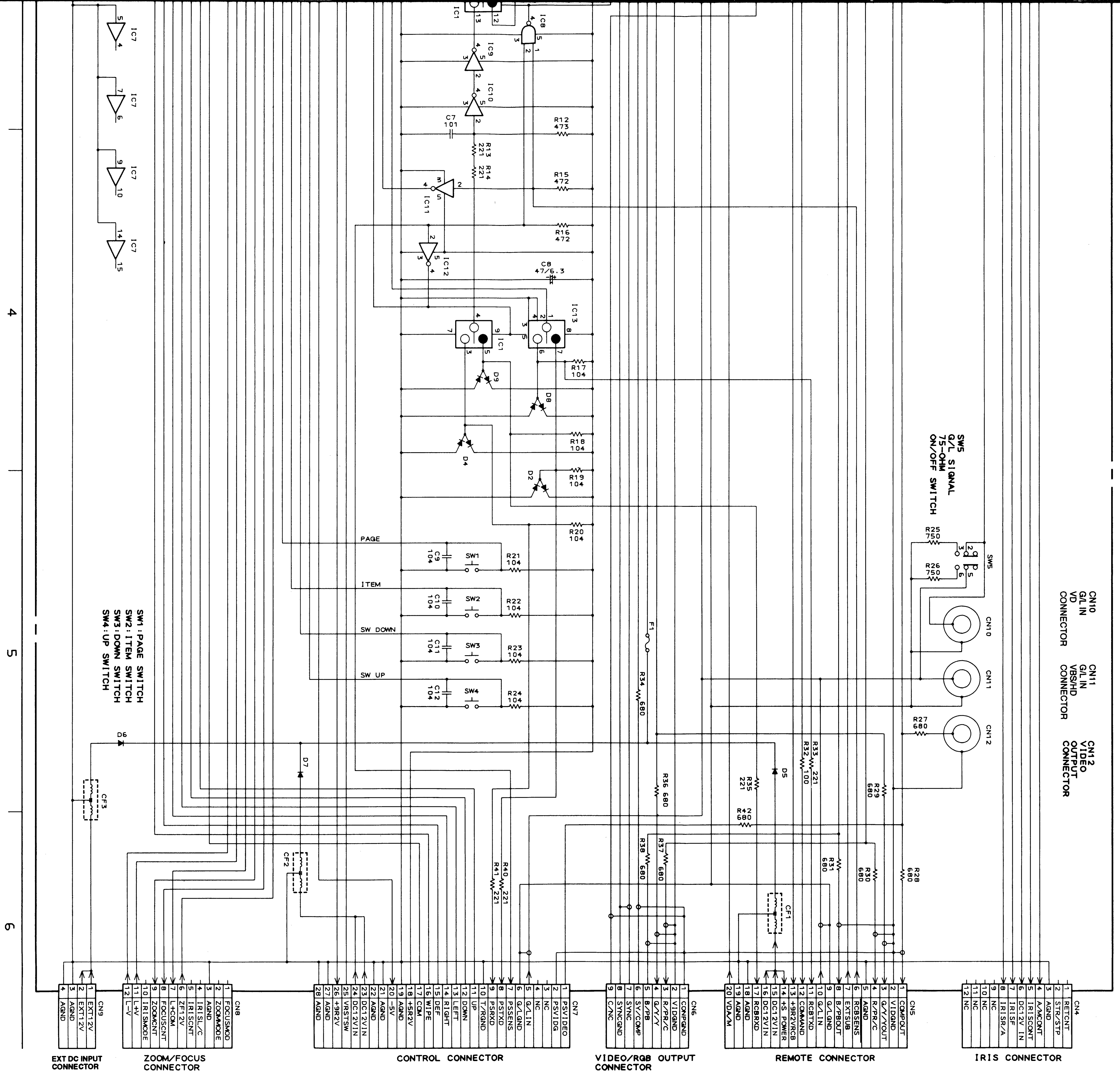
## < Index>
## REAR BOARD

| | |
|---|---|
| IC1 | B1, B3, B4 |
| IC2 | B1, B2 |
| IC5 | B2 |
| IC6 | B3 |
| IC7 | A3,A4,B2,B3 |
| IC8 | B3 |
| IC9 | B3 |
| IC10 | B3 |
| IC11 | B4 |
| IC12 | B4 |
| IC13 | B4 |
| Q1 | B2 |
| D1 | B1 |
| D2 | B5 |
| D3 | B3 |
| D4 | B4 |
| D5 | C5 |
| D6 | A5 |
| D7 | A5 |
| D8 | B4 |
| D9 | B4 |

**REAR BOARD**

| | IC1 | IC2 | IC5 | IC6 | IC7 | IC8 | IC9 | IC10 | IC11 | IC12 | IC13 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 5.2 | 0 | 3.0 | 5.2 | 5.2 | - | - | - | - | - | 5.2 |
| 2 | 5.0 | 0 | 2.5 | 2.0 | 5.2 | 5.2 | 0 | 5.2 | 5.2 | 5.2 | 0 |
| 3 | 5.1 | 0 | 2.5 | 2.5 | 5.2 | 0 | 0 | 0 | 0 | 0 | - |
| 4 | 5.0 | 5.2 | -5.2 | 0 | 0 | 0 | 5.2 | 0 | 0 | 0 | 0 |
| 5 | 5.2 | 5.2 | - | - | 0 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 0 |
| 6 | 0 | 5.2 | - | - | 0 | | | | | | 5.1 |
| 7 | 0 | 0 | 4.7 | 0 | 0 | | | | | | 5.2 |
| 8 | 0 | 5.2 | 5.2 | 5.2 | 0 | | | | | | 5.2 |
| 9 | 0 | 5.2 | | | 0 | | | | | | |
| 10 | 0 | 5.2 | | | 0 | | | | | | |
| 11 | 0 | 0 | | | 5.0 | | | | | | |
| 12 | 5.2 | 0 | | | 4.9 | | | | | | |
| 13 | 5.2 | 0 | | | - | | | | | | |
| 14 | 5.2 | 5.2 | | | 0 | | | | | | |
| 15 | 5.0 | | | | 0 | | | | | | |
| 16 | 5.2 | | | | - | | | | | | |

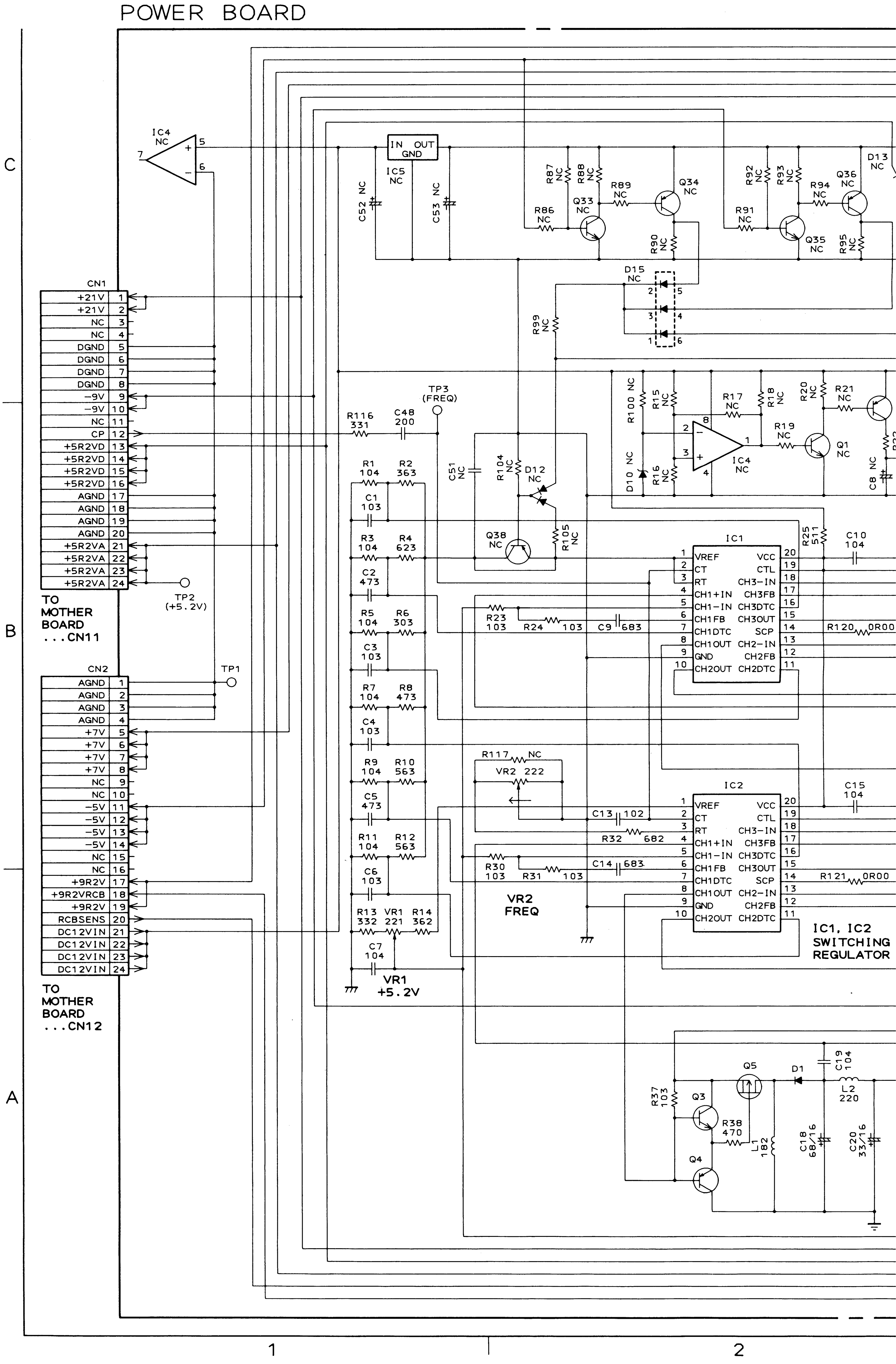
# M OF REAR BOARD (WV-E550E)


IC1
IC7
IC8
IC9
IC10
IC11
IC12
IC13
C7 101
C8 47/6.3
R12 473
R13 221
R14 221
R15 472
R16 472
R17 104
R18 104
R19 104
R20 104
D2
D4
D5
D6
D7
D8
D9
PAGE
ITEM
SW DOWN
SW UP
C9 104
C10 104
C11 104
C12 104
SW1
SW2
SW3
SW4
R21 104
R22 104
R23 104
R24 104
SW1:PAGE SWITCH
SW2:ITEM SWITCH
SW3:DOWN SWITCH
SW4:UP SWITCH
SW5 G/L SIGNAL 75-OHM ON/OFF SWITCH
R25 750
R26 750
R27 680
R28 680
R29 680
R30 680
R31 680
R32 100
R33 221
R34 680
R35 221
R36 680
R37 680
R38 680
R40 221
R41 221
R42 680
F1
CF1
CF2
CF3
CN10 G/L IN VD CONNECTOR
CN11 G/L IN VBS/HD CONNECTOR
CN12 VIDEO OUTPUT CONNECTOR
4
5
6
CN9
1 EXT12V
2 EXT12V
3 AGND
4 AGND
EXT DC INPUT CONNECTOR
CN8
1 FOCUSMOD
2 ZOOMMODE
3 AGND
4 IRISL/C
5 IRISCNT
6 ZF12V
7 L-COM
8 FOCUSCNT
9 ZOOMCNT
10 IRISMODE
11 L+V
12 L-V
ZOOM/FOCUS CONNECTOR
CN7
1 PSVIDEO
2 PSVIDG
3 NC
4 NC
5 G/LIN
6 G/LGND
7 PSSENS
8 PSTXD
9 PSRXD
10 T/RGND
11 UP
12 DOWN
13 LEFT
14 RIGHT
15 DEF
16 WIPE
17 COM
18 +5R2V
19 AGND
20 -5V
21 AGND
22 AGND
23 DC12VIN
24 DC12VIN
25 VRSTSW
26 +9R2V
27 AGND
28 AGND
CONTROL CONNECTOR
CN6
1 COMPGND
2 VIDGND
3 R/PR/C
4 G/Y/Y
5 B/PB
6 SY/COMP
7 SYNC
8 SYNCGND
9 C/NC
VIDEO/RGB OUTPUT CONNECTOR
CN5
1 COMPOUT
2 VIDGND
3 C/Y/YOUT
4 R/PR/C
5 AGND
6 RCBSENS
7 EXTSUB
8 B/PBOUT
9 G/LGND
10 G/LIN
11 RCBTXD
12 COMMAND
13 +9R2VRCB
14 +S POWER
15 DC12VIN
16 DC12VIN
17 RCBRXD
18 AGND
19 AGND
20 VD/A/M
REMOTE CONNECTOR
CN4
1 RETCNT
2 STR/STP
3 AGND
4 A/MCONT
5 IRISCONT
6 DC12V IN
7 IRISF
8 IRISR/A
9 NC
10 NC
11 NC
12 NC
IRIS CONNECTOR

# SCHEMATIC DIAGRAM OF POV

## < Index>
## POWER BOARD

| | |
|---|---|
| IC1 | B2 |
| IC2 | B2 |
| IC3 | A4, B4 |
| Q3 | A2 |
| Q4 | A2 |
| Q5 | A2 |
| Q6 | B3 |
| Q7 | B3 |
| Q8 | C3 |
| Q9 | C4 |
| Q10 | B4 |
| Q11 | B3 |
| Q12 | B3 |
| Q13 | B3 |
| Q14 | B4 |
| Q15 | B4 |
| Q16 | B4 |
| Q17 | B4 |
| Q18 | B3 |
| Q19 | B3 |
| Q20 | B3 |
| Q21 | A3 |
| Q22 | A3 |
| Q23 | A3 |
| Q24 | A3 |
| Q25 | A4 |
| Q26 | A4 |
| Q27 | A4 |
| Q28 | A3 |
| Q29 | A3 |
| Q30 | A4 |
| Q31 | A4 |
| Q39 | A3 |
| D1 | A2 |
| D2 | B3 |
| D3 | B3 |
| D4 | B3 |
| D5 | A4 |
| D6 | A3 |
| D8 | A4 |
| D9 | A3 |

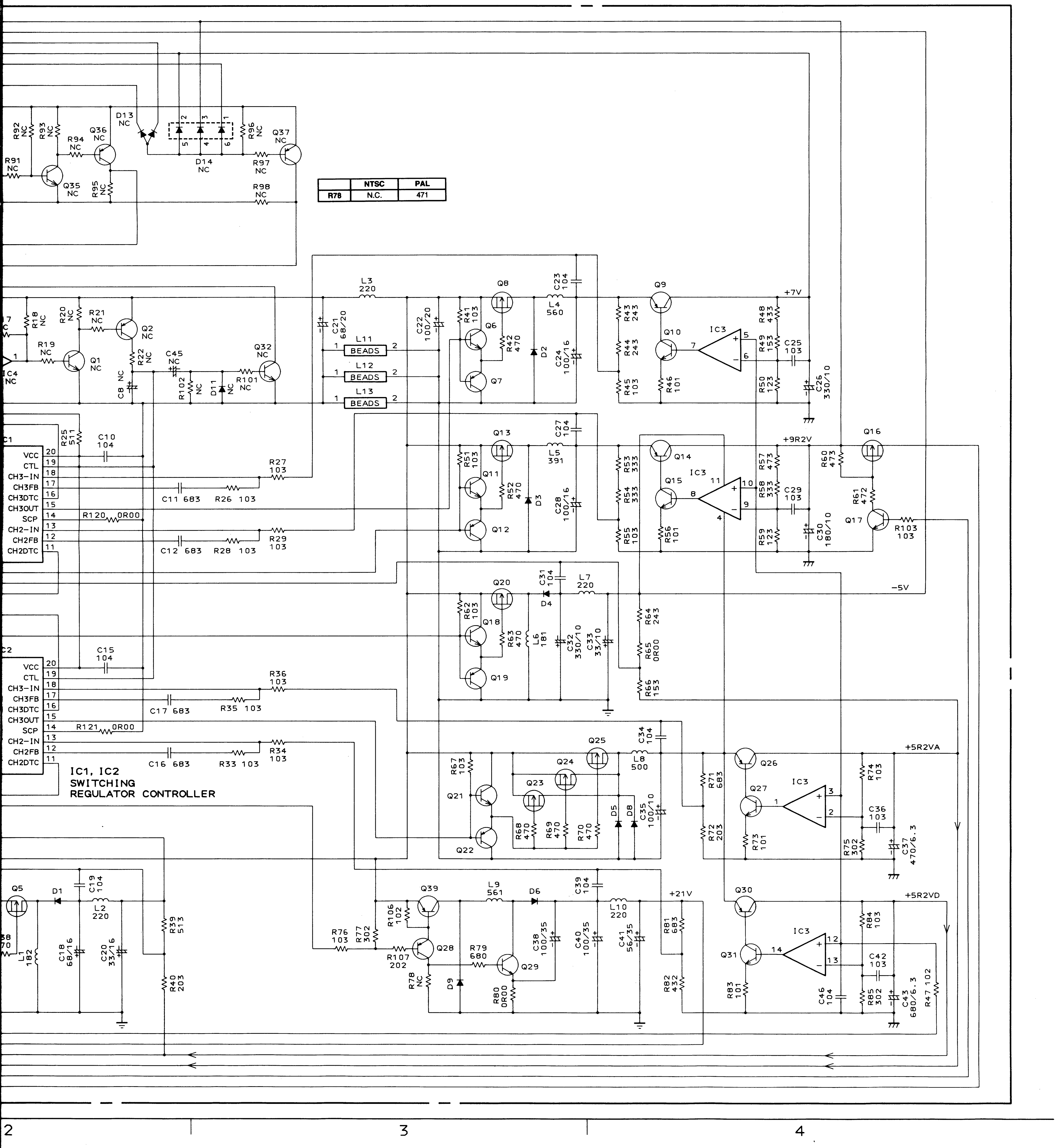

POWER BOARD
A
B
C
1
2
CN1
+21V 1
+21V 2
NC 3
NC 4
DGND 5
DGND 6
DGND 7
DGND 8
-9V 9
-9V 10
NC 11
CP 12
+5R2VD 13
+5R2VD 14
+5R2VD 15
+5R2VD 16
AGND 17
AGND 18
AGND 19
AGND 20
+5R2VA 21
+5R2VA 22
+5R2VA 23
+5R2VA 24
TO MOTHER BOARD ...CN11
TP2 (+5.2V)
CN2
AGND 1
AGND 2
AGND 3
AGND 4
+7V 5
+7V 6
+7V 7
+7V 8
NC 9
NC 10
-5V 11
-5V 12
-5V 13
-5V 14
NC 15
NC 16
+9R2V 17
+9R2VRCB 18
+9R2V 19
RCBSENS 20
DC12VIN 21
DC12VIN 22
DC12VIN 23
DC12VIN 24
TO MOTHER BOARD ...CN12
TP1
IC4 NC
IC5 NC
IN OUT GND
C52 NC
C53 NC
TP3 (FREQ)
R116 331
C48 200
R1 104
R2 363
C1 103
R3 104
R4 623
C2 473
R5 104
R6 303
C3 103
R7 104
R8 473
C4 103
R9 104
R10 563
C5 473
R11 104
R12 563
C6 103
R13 332
VR1 221
R14 362
C7 104
VR1 +5.2V
C51 NC
R104 NC
D12 NC
Q38 NC
R105 NC
R99 NC
D15 NC
R86 NC
R87 NC
R88 NC
R89 NC
Q33 NC
Q34 NC
R90 NC
R91 NC
R92 NC
R93 NC
R94 NC
Q35 NC
Q36 NC
R95 NC
D13 NC
R100 NC
R15 NC
R16 NC
D10 NC
R17 NC
R18 NC
R19 NC
R20 NC
R21 NC
Q1 NC
C8 NC
IC4 NC
R25 511
C10 104
IC1
VREF VCC
CT CTL
RT CH3-IN
CH1+IN CH3FB
CH1-IN CH3DTC
CH1FB CH3OUT
CH1DTC SCP
CH1OUT CH2-IN
GND CH2FB
CH2OUT CH2DTC
R23 103
R24 103
C9 683
R120 0R00
R117 NC
VR2 222
VR2 FREQ
IC2
C13 102
R32 682
C14 683
R30 103
R31 103
C15 104
R121 0R00
IC1, IC2 SWITCHING REGULATOR
R37 103
Q3
Q4
Q5
R38 470
L1 182
D1
C19 104
L2 220
C18 68/16
C20 33/16

### POWER BOARD

| | IC1 | IC2 | IC3 |
|---|---|---|---|
| Pin 1 | 2.5 | 2.5 | 0.7 |
| 2 | 1.6 | 1.6 | 1.2 |
| 3 | 2.5 | 1.3 | 1.2 |
| 4 | 1.2 | 1.2 | 5.5 |
| 5 | 1.2 | 1.2 | 1.2 |
| 6 | 1.4 | 1.5 | 1.2 |
| 7 | 1.5 | 1.6 | 0.6 |
| 8 | 9.4 | 10.2 | 0.3 |
| 9 | 0 | 0 | 1.2 |
| 10 | 9.0 | 7.9 | 1.2 |
| 11 | 1.9 | 1.7 | -5.2 |
| 12 | 1.8 | 1.4 | 1.2 |
| 13 | 1.2 | 1.3 | 1.2 |
| 14 | 0 | 0 | 0.8 |
| 15 | 8.7 | 8.4 | |
| 16 | 1.8 | 1.7 | |
| 17 | 1.7 | 1.6 | |
| 18 | 1.2 | 1.3 | |
| 19 | 10.9 | 10.9 | |
| 20 | 9.0 | 9.0 | |

| | B | C | E |
|---|---|---|---|
| Q3 | 10.2 | 11.4 | 6.8 |
| 4 | 10.3 | 0 | 6.8 |
| 5 | (G) 7.2 | (D) 0 | (S) 11.4 |
| 6 | 8.7 | 11.4 | 4.5 |
| 7 | 8.7 | 0 | 4.5 |
| 8 | (G) 5.5 | (D) 7.3 | (S) 11.4 |
| 9 | (G) 7.3 | (D) 7.0 | (S) 6.6 |
| 10 | 0.6 | 6.6 | 0.1 |
| 11 | 9.1 | 11.4 | 2.7 |
| 12 | 9.1 | 0 | 2.7 |
| 13 | (G) 3.5 | (D) 9.5 | (S) 11.4 |
| 14 | (G) 9.5 | (D) 9.2 | (S) 8.9 |
| 15 | 0.3 | 8.9 | 0.4 |
| 16 | (G) 9.2 | (D) - | (S) 9.2 |
| 17 | 0 | 9.2 | 0 |
| 18 | 9.5 | 11.4 | 8.0 |
| 19 | 9.6 | 0 | 8.0 |
| 20 | (G) 8.3 | (D) - | (S) 11.4 |
| 21 | 8.4 | 11.4 | 6.1 |
| 22 | 8.4 | 0 | 6.1 |
| 23 | (G) 6.2 | (D) 5.6 | (S) 11.4 |
| 24 | (G) 6.2 | (D) 5.6 | (S) 11.4 |
| 25 | (G) 6.2 | (D) 5.6 | (S) 11.4 |
| 26 | (G) 4.9 | (D) 5.2 | (S) 5.5 |
| 27 | 0.6 | 4.9 | 0.1 |
| 29 | (G) 0.8 | (D) 11.4 | (S) 0.6 |
| 30 | (G) 4.9 | (D) 5.2 | (S) 5.5 |
| 31 | 0.8 | 4.5 | 0.2 |
| 33 | 0.2 | 11.4 | 0 |
| 34 | -2.4 | 11.4 | 0 |
| 35 | 0.6 | 0 | 0 |
| 36 | 0 | 11.4 | 0 |
| 37 | 0.6 | 0 | 0 |
| 38 | 0 | 11.4 | 0 |
| 39 | 0.6 | 0 | 0 |
| 40 | 0 | 11.4 | 0 |
| 41 | 0.6 | 0 | 0 |
| 42 | 0 | 11.4 | 0 |
| 43 | 0 | 0 | 0.7 |
| 44 | 0 | 11.4 | 0 |

# RAM OF POWER BOARD (WV-E550E)


IC1, IC2
SWITCHING
REGULATOR CONTROLLER
VCC 20
CTL 19
CH3-IN 18
CH3FB 17
CH3DTC 16
CH3OUT 15
SCP 14
CH2-IN 13
CH2FB 12
CH2DTC 11
R25 511
C10 104
C15 104
R27 103
R26 103
C11 683
R120 0R00
R121 0R00
C12 683
R28 103
R29 103
R36 103
C17 683
R35 103
C16 683
R33 103
R34 103
R91 NC
R92 NC
R93 NC
R94 NC
Q35 NC
Q36 NC
R95 NC
D13 NC
D14 NC
R96 NC
R97 NC
Q37 NC
R98 NC
R18 NC
R19 NC
R20 NC
R21 NC
Q1 NC
Q2 NC
R22 NC
C45 NC
C8 NC
R102 NC
D11 NC
R101 NC
Q32 NC
IC4 NC
L3 220
C21 68/20
L11 BEADS
L12 BEADS
L13 BEADS
C22 100/20
Q8
R41 103
Q6
Q7
R42 470
D2
L4 560
C23 104
C24 100/16
Q9
R43 243
R44 243
R45 103
Q10
R46 101
IC3
R48 433
R49 153
C25 103
R50 123
C26 330/10
+7V
Q13
R51 103
Q11
R52 470
Q12
D3
L5 391
C27 104
C28 100/16
Q14
R53 333
R54 333
R55 103
Q15
R56 101
R57 473
R58 333
C29 103
R59 123
C30 180/10
+9R2V
Q16
R60 473
R61 472
Q17
R103 103
-5V
Q20
R62 103
Q18
R63 470
Q19
L6 181
D4
C31 104
L7 220
C32 330/10
C33 33/10
R64 243
R65 0R00
R66 153
Q25
Q24
Q23
Q21
Q22
R67 103
R68 470
R69 470
R70 470
D5
D8
L8 500
C34 104
C35 100/10
Q26
Q27
R71 683
R72 203
R73 101
R74 103
C36 103
R75 302
C37 470/6.3
+5R2VA
Q5
D1
C19 104
L2 220
L1 182
C18 68/16
C20 33/16
R39 513
R40 203
Q39
R106 102
R76 103
R77 302
Q28
R107 202
R78 NC
D9
L9 561
D6
R79 680
Q29
R80 0R00
C38 100/35
C39 104
C40 100/35
L10 220
C41 56/35
+21V
R81 683
R82 432
Q30
Q31
R83 101
C46 104
R84 103
C42 103
R85 302
C43 680/6.3
R47 102
+5R2VD
2
3
4

|  | NTSC | PAL |
|---|---|---|
| R78 | N.C. | 471 |

**Note: The value indicated in the schematic diagram should be read as follows:**

□ □ □
- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Siginificant Digit (1 - 9)

**<Example>**

For Resistor:

330 → 33 x $10^0$ = 33 Ω
561 → 56 x $10^1$ = 560 Ω
123 → 12 x $10^3$ = 12k Ω
0R00 = 0 Ω

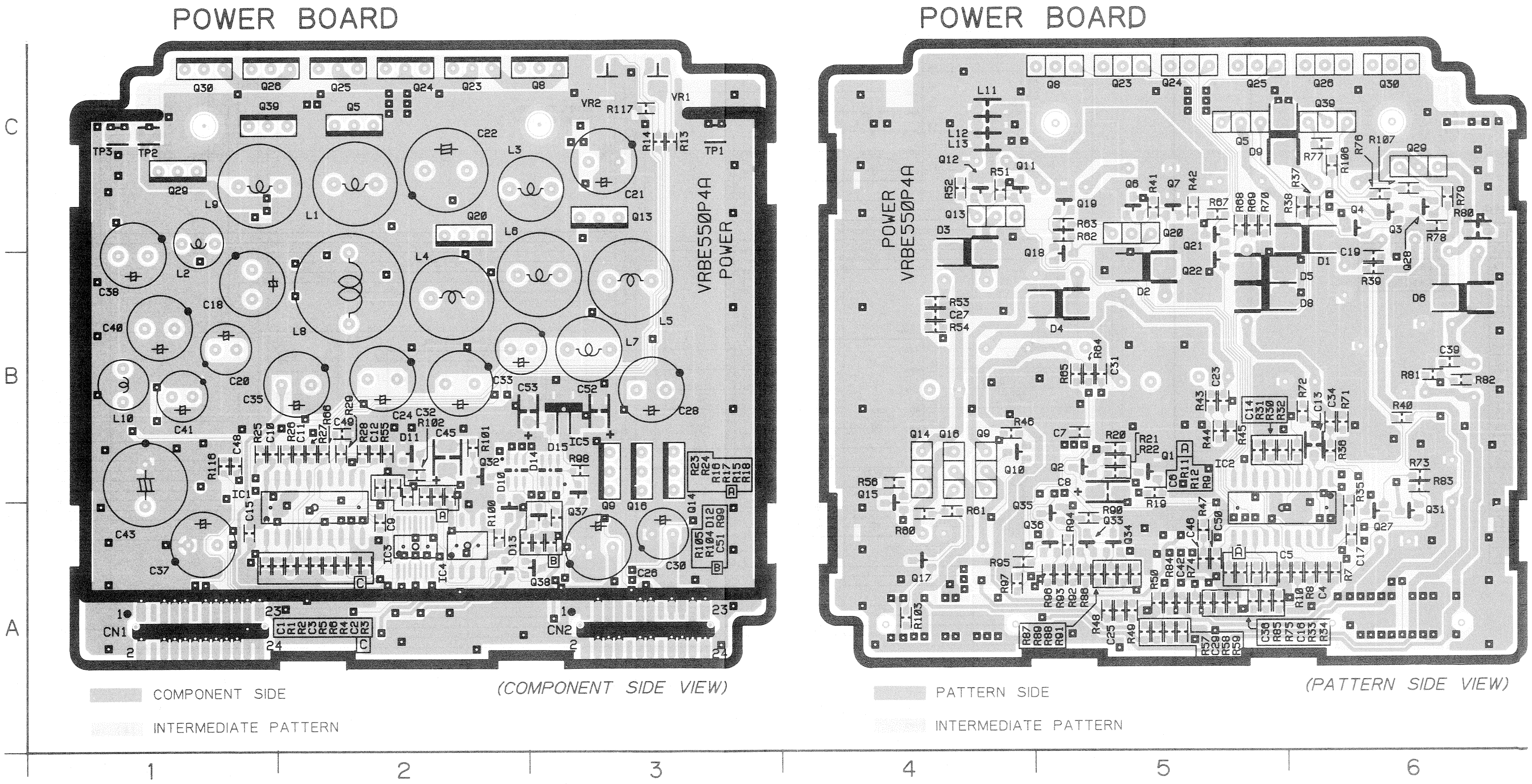
For Capacitor:

820 → 82 x $10^0$ = 82 pF
102 → 10 x $10^2$ = 1000 pF = 0.001 µF
104 → 10 x $10^4$ = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.

# CONDUCTOR VIEW OF POWER BOARD (WV-E550E)

**< Index>**
**POWER BOARD**

| | |
|---|---|
| IC1 | B1 |
| IC2 | B5 |
| IC3 | A2 |
| Q3 | C6 |
| Q4 | C6 |
| Q5 | C2 |
| Q6 | C5 |
| Q7 | C5 |
| Q8 | C3 |
| Q9 | B3 |
| Q10 | B4 |
| Q11 | C4 |
| Q12 | C4 |
| Q13 | C3 |
| Q14 | B3 |
| Q15 | A4 |
| Q16 | B3 |
| Q17 | A4 |
| Q18 | B5 |
| Q19 | C5 |
| Q20 | C2 |
| Q21 | B5 |
| Q22 | B5 |
| Q23 | C2 |
| Q24 | C2 |
| Q25 | C2 |
| Q26 | C1 |
| Q27 | A6 |
| Q28 | C6 |
| Q29 | C1 |
| Q30 | C1 |
| Q31 | A6 |
| Q39 | C1 |
| D1 | C6 |
| D2 | B5 |
| D3 | C4 |
| D4 | B5 |
| D5 | B5 |
| D6 | B6 |
| D8 | B5 |
| D9 | C5 |


POWER BOARD
POWER BOARD
C
B
A
1
2
3
4
5
6
VRBE550P4A POWER
POWER VRBE550P4A
CN1
CN2
COMPONENT SIDE
INTERMEDIATE PATTERN
PATTERN SIDE
INTERMEDIATE PATTERN

(COMPONENT SIDE VIEW)

(PATTERN SIDE VIEW)

# SCHEMATIC DIAGRAM OF SENSOR BOARD (WV-E550E)

## < Index >
## SENSOR BOARD

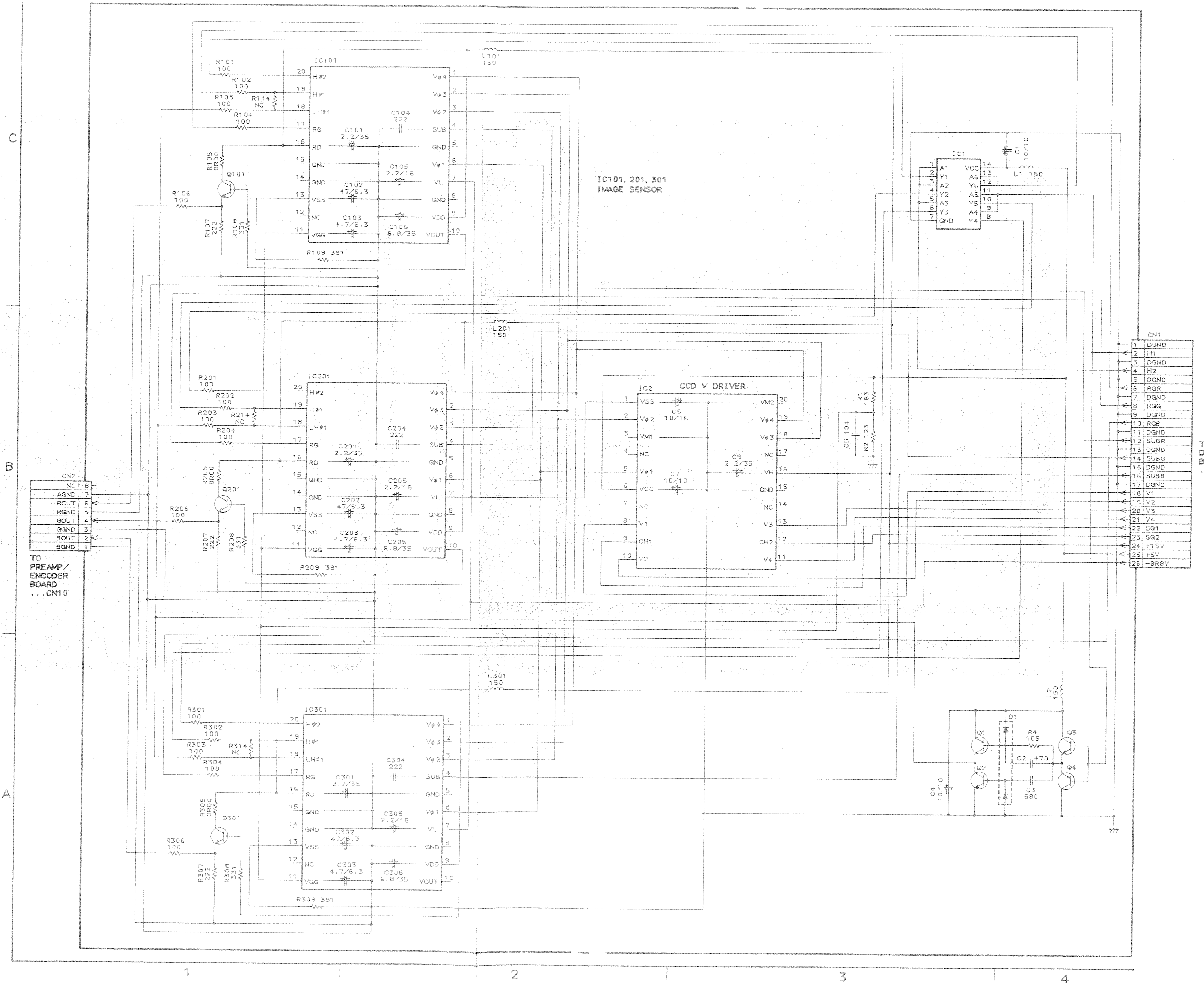
| | |
|---|---|
| IC1 | C3 |
| IC2 | B3 |
| IC101 | C1 |
| IC201 | B1 |
| IC301 | A1 |
| Q1 | A3 |
| Q2 | A3 |
| Q3 | A4 |
| Q4 | A4 |
| Q101 | C11 |
| Q201 | B1 |
| Q301 | A1 |
| D1 | A4 |

## SENSOR BOARD

| | IC2 |
|---|---|
| Pin 1 | -8.7 |
| 2 | -0.3 |
| 3 | 25.7 |
| 4 | 27.0 |
| 5 | -0.3 |
| 6 | 4.9 |
| 7 | 24.0 |
| 8 | 0.2 |
| 9 | 4.9 |
| 10 | 2.9 |
| 11 | 4.6 |
| 12 | 1.5 |
| 13 | 4.6 |
| 14 | 2.0 |
| 15 | 0 |
| 16 | 14.9 |
| 17 | 2.2 |
| 18 | -8.3 |
| 19 | -8.3 |
| 20 | 0 |

| | B | C | E |
|---|---|---|---|
| Q101 | 8.7 | 14.9 | 8.0 |
| 201 | 8.3 | 14.9 | 7.5 |
| 301 | 8.5 | 14.9 | 7.8 |

SENSOR BOARD


C
B
A
1
2
3
4
IC101
IC201
IC301
IC101, 201, 301
IMAGE SENSOR
IC2 CCD V DRIVER
IC1
L101 150
L201 150
L301 150
L1 150
L2 150
C1 10/10
C5 104
R1 183
R2 123
C6 10/16
C7 10/10
C9 2.2/35
C2 470
C3 680
C4 10/10
R4 105
Q1
Q2
Q3
Q4
D1
Q101
Q201
Q301
R101 100
R102 100
R103 100
R104 100
R114 NC
R105 0R00
R106 100
R107 222
R108 331
R109 391
C101 2.2/35
C102 47/6.3
C103 4.7/6.3
C104 222
C105 2.2/16
C106 6.8/35
CN2
NC 8
AGND 7
ROUT 6
RGND 5
GOUT 4
GGND 3
BOUT 2
BGND 1
TO PREAMP/ENCODER BOARD ...CN10
CN1
1 DGND
2 H1
3 DGND
4 H2
5 DGND
6 RGR
7 DGND
8 RGG
9 DGND
10 RGB
11 DGND
12 SUBR
13 DGND
14 SUBG
15 DGND
16 SUBB
17 DGND
18 V1
19 V2
20 V3
21 V4
22 SG1
23 SG2
24 +15V
25 +5V
26 -8R8V
TO DRIVE BOARD ...CN1

**Note:** The value indicated in the schematic diagram should be read as follows:

☐ ☐ ☐
Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

< Example >

For Resistor:
330 → 33 x $10^0$ = 33 Ω
561 → 56 x $10^1$ = 560 Ω
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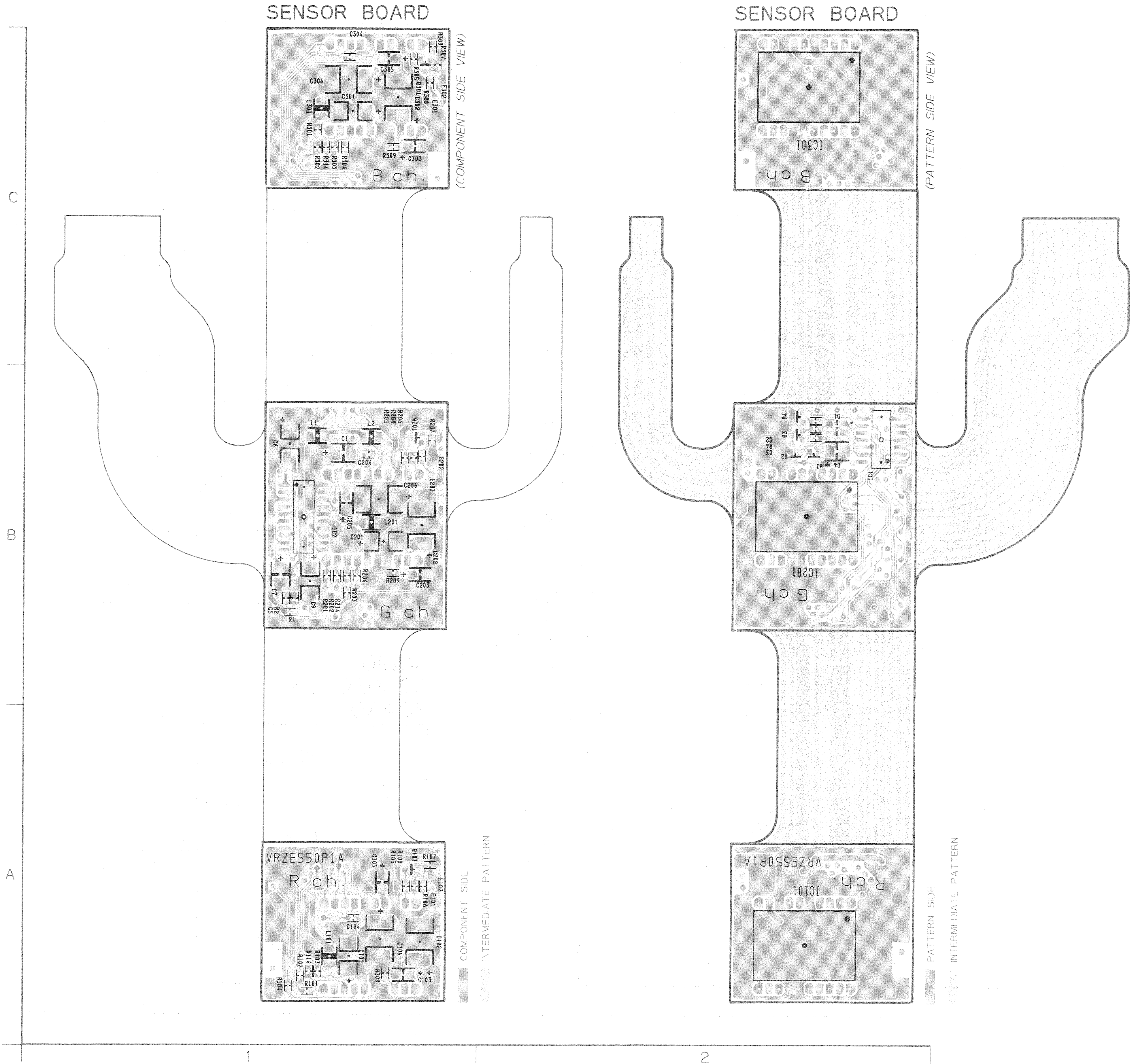
102 → 10 x $10^2$ = 1000 pF = 0.001 μF
104 → 10 x $10^4$ = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

**Note:**
All parts mounted on the Sensor Board are not supply individually.
Please order as the Head Optical Ass'y, part number YWV0EA0282AN.

# CONDUCTOR VIEW OF SENSOR BOARD (WV-E550E)

**< Index>**
**SENSOR BOARD**

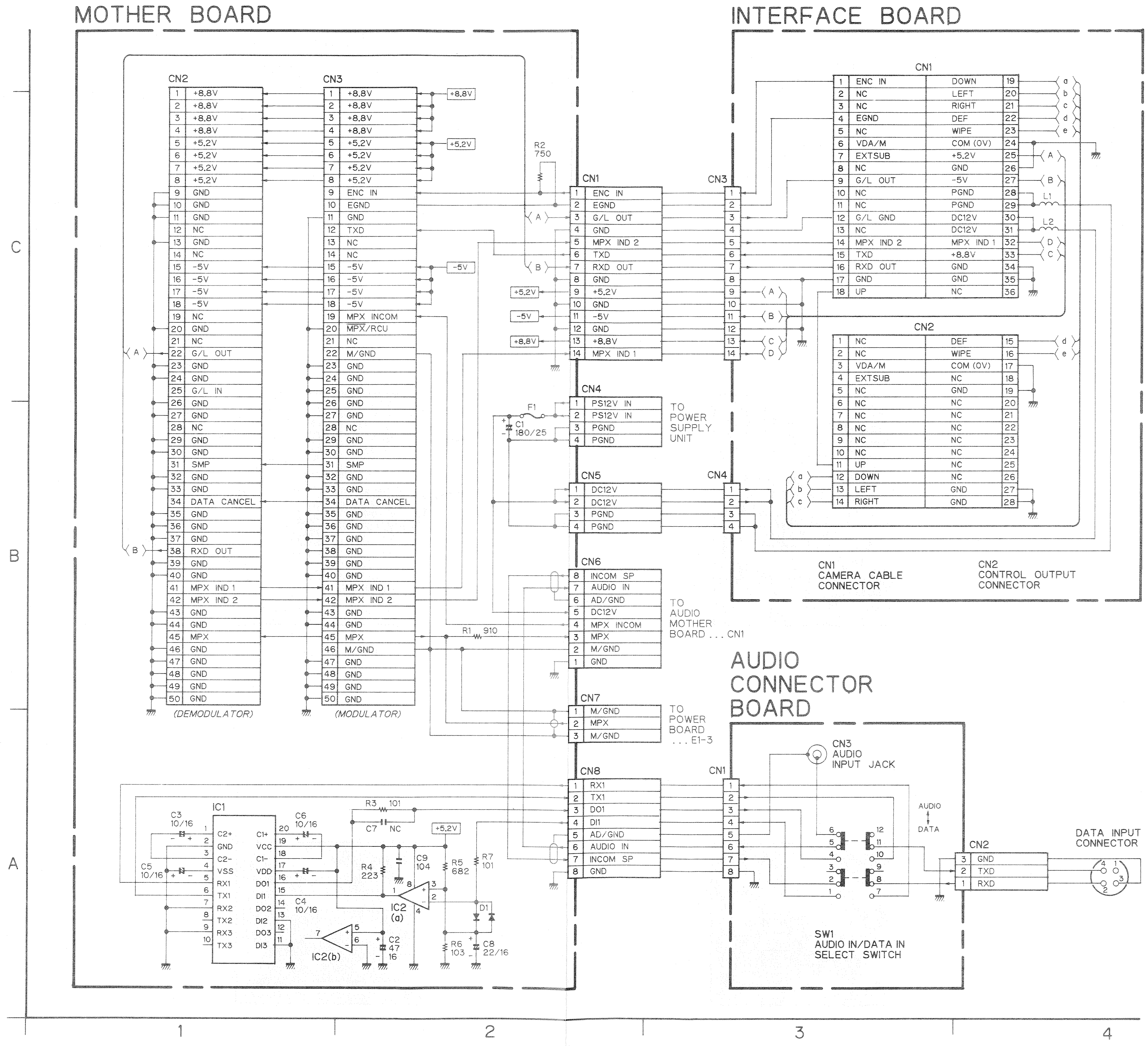
| | |
|---|---|
| IC1 | B2 |
| IC2 | B1 |
| IC101 | A2 |
| IC201 | B2 |
| IC301 | C2 |
| Q1 | B2 |
| Q2 | B2 |
| Q3 | B2 |
| Q4 | B2 |
| Q101 | A1 |
| Q201 | B1 |
| Q301 | C1 |
| D1 | B2 |


SENSOR BOARD
(COMPONENT SIDE VIEW)
B ch.
G ch.
VRZE550P1A
R ch.
COMPONENT SIDE
INTERMEDIATE PATTERN
SENSOR BOARD
(PATTERN SIDE VIEW)
IC301
B ch.
IC201
G ch.
VRZE550P1A
R ch.
IC101
PATTERN SIDE
INTERMEDIATE PATTERN
C
B
A
1
2

# SCHEMATIC DIAGRAM OF MOTHER, INTERFACE, AUDIO CONNECTOR BOARD

**< Index>**
**MOTHER BOARD**

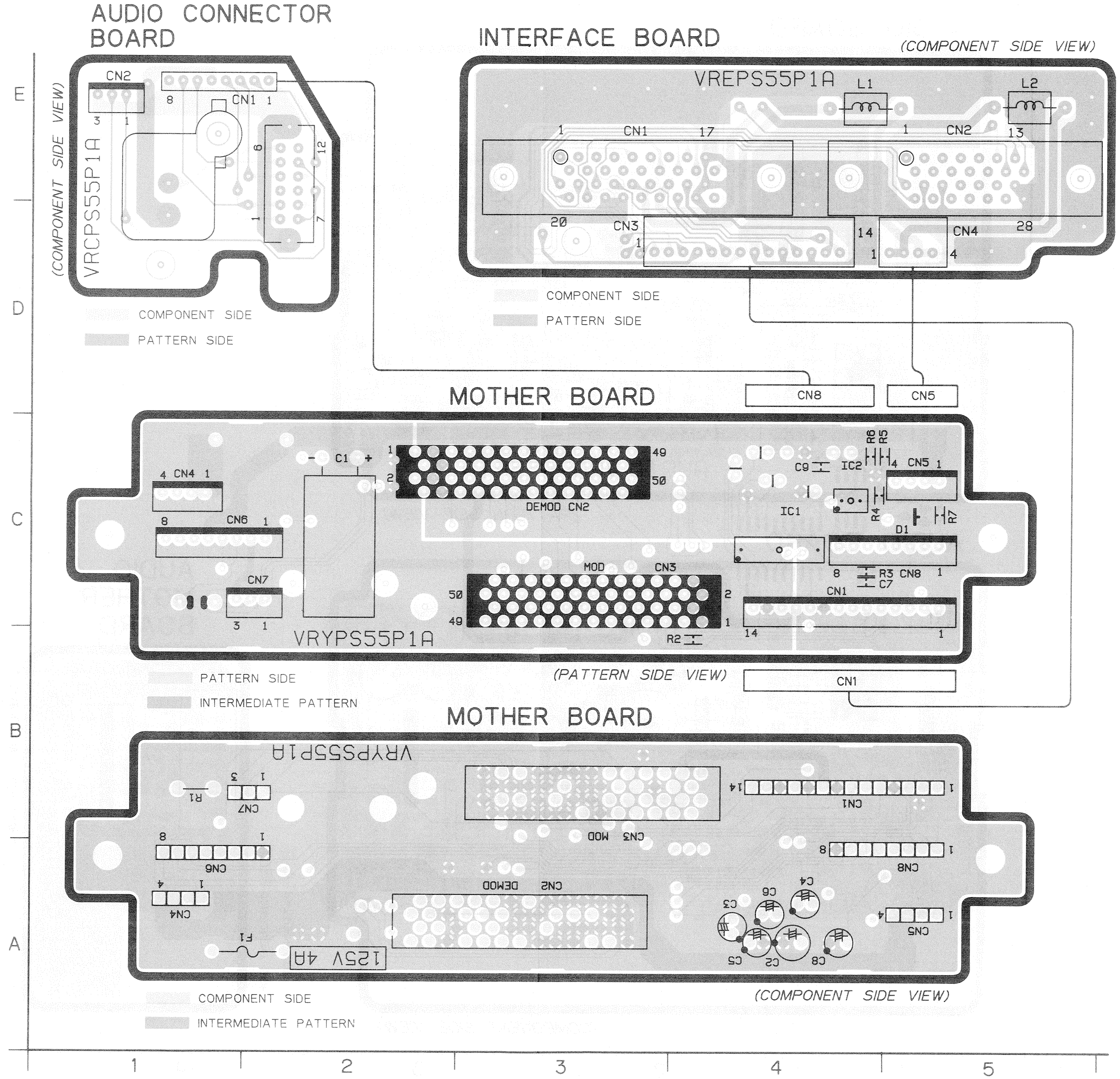
| | |
|---|---|
| IC1 | A1 |
| IC2 | A2 |
| D1 | A2 |


MOTHER BOARD
INTERFACE BOARD
AUDIO CONNECTOR BOARD
CN2
CN3
(DEMODULATOR)
(MODULATOR)
+8.8V
+5.2V
-5V
R2 750
R1 910
F1
C1 180/25
CN1
ENC IN
EGND
G/L OUT
GND
MPX IND 2
TXD
RXD OUT
+5.2V
-5V
+8.8V
MPX IND 1
CN4
PS12V IN
PGND
TO POWER SUPPLY UNIT
CN5
DC12V
CN6
INCOM SP
AUDIO IN
AD/GND
MPX INCOM
MPX
M/GND
TO AUDIO MOTHER BOARD ... CN1
CN7
TO POWER BOARD ... E1-3
CN8
RX1
TX1
DO1
DI1
IC1
IC2(a)
IC2(b)
C3 10/16
C5 10/16
C6 10/16
C4 10/16
C7 NC
R3 101
R4 223
C9 104
R5 682
R7 101
D1
R6 103
C8 22/16
C2 47 16
CN1 CAMERA CABLE CONNECTOR
CN2 CONTROL OUTPUT CONNECTOR
DOWN
LEFT
RIGHT
DEF
WIPE
COM (0V)
EXTSUB
VDA/M
UP
PGND
DC12V
L1
L2
CN3 AUDIO INPUT JACK
AUDIO DATA
SW1 AUDIO IN/DATA IN SELECT SWITCH
DATA INPUT CONNECTOR
RXD
A
B
C
1
2
3
4

# CONDUCTOR VIEW OF MOTHER, INTERFACE, AUDIO CONNECTOR BOARD

**< Index>**
**MOTHER BOARD**

| | |
|---|---|
| IC1 | C4 |
| IC2 | C4 |
| D1 | C5 |

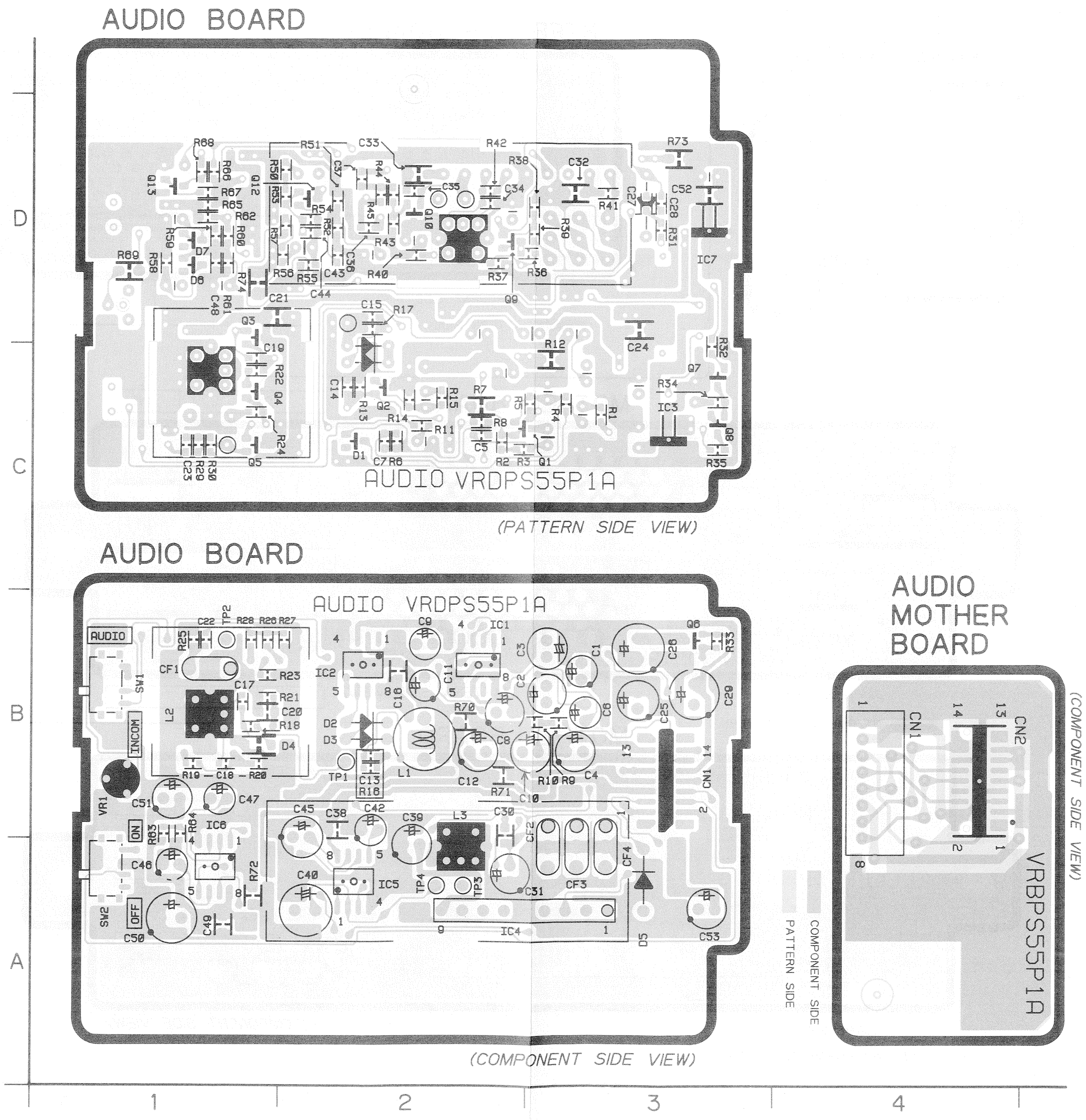


AUDIO CONNECTOR BOARD
(COMPONENT SIDE VIEW)
VRCPS55P1A
CN2
CN1
8
1
3
1
6
12
1
7
COMPONENT SIDE
PATTERN SIDE
INTERFACE BOARD
(COMPONENT SIDE VIEW)
VREPS55P1A
L1
L2
CN1
1
17
CN2
1
13
20
CN3
1
14
CN4
28
1
4
COMPONENT SIDE
PATTERN SIDE
MOTHER BOARD
CN8
CN5
4 CN4 1
8 CN6 1
CN7
3 1
C1
DEMOD CN2
1
2
49
50
MOD CN3
50
49
2
1
R2
C9
IC2
R6
R5
4 CN5 1
IC1
R4
R7
D1
8 R3 CN8 1
C7
CN1
14
1
VRYPS55P1A
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE VIEW)
CN1
MOTHER BOARD
VRYPS55P1A
R1
CN7
CN6
CN4
F1
125V 4A
CN3 MOD
CN2 DEMOD
CN1
CN8
CN5
C3
C6
C4
C5
C2
C8
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
E
D
C
B
A
1
2
3
4
5

# CONDUCTOR VIEW OF AUDIO/AUDIO MOTHER BOARD (WV-PS550)

**< Index>**
**AUDIO BOARD**

| | |
|---|---|
| IC1 | B2 |
| IC2 | B2 |
| IC3 | C3 |
| IC4 | A2 |
| IC5 | A2 |
| IC6 | A1 |
| IC7 | D3 |
| Q1 | C2 |
| Q2 | C2 |
| Q3 | D1 |
| Q4 | C1 |
| Q5 | C1 |
| Q6 | B3 |
| Q7 | C3 |
| Q8 | C3 |
| Q9 | D2 |
| Q10 | D2 |
| Q12 | D2 |
| Q13 | D1 |
| D1 | C2 |
| D2 | B2 |
| D3 | B2 |
| D4 | B1 |
| D5 | A3 |
| D6 | D1 |
| D7 | D1 |


AUDIO BOARD
AUDIO VRDPS55P1A
(PATTERN SIDE VIEW)
AUDIO BOARD
AUDIO VRDPS55P1A
(COMPONENT SIDE VIEW)
AUDIO MOTHER BOARD
VRBPS55P1A
(COMPONENT SIDE VIEW)
CN1
CN2
COMPONENT SIDE
PATTERN SIDE
AUDIO
INCOM
ON
OFF
SW1
SW2
VR1
CF1
CF2
CF3
CF4
L1
L2
L3
TP1
TP2
TP3
TP4
IC1
IC2
IC3
IC4
IC5
IC6
IC7
D
C
B
A
1
2
3
4

# SCHEMATIC DIAGRAM OF AUDIO/AUDIO MOTHER BOARD (WV-PS550)

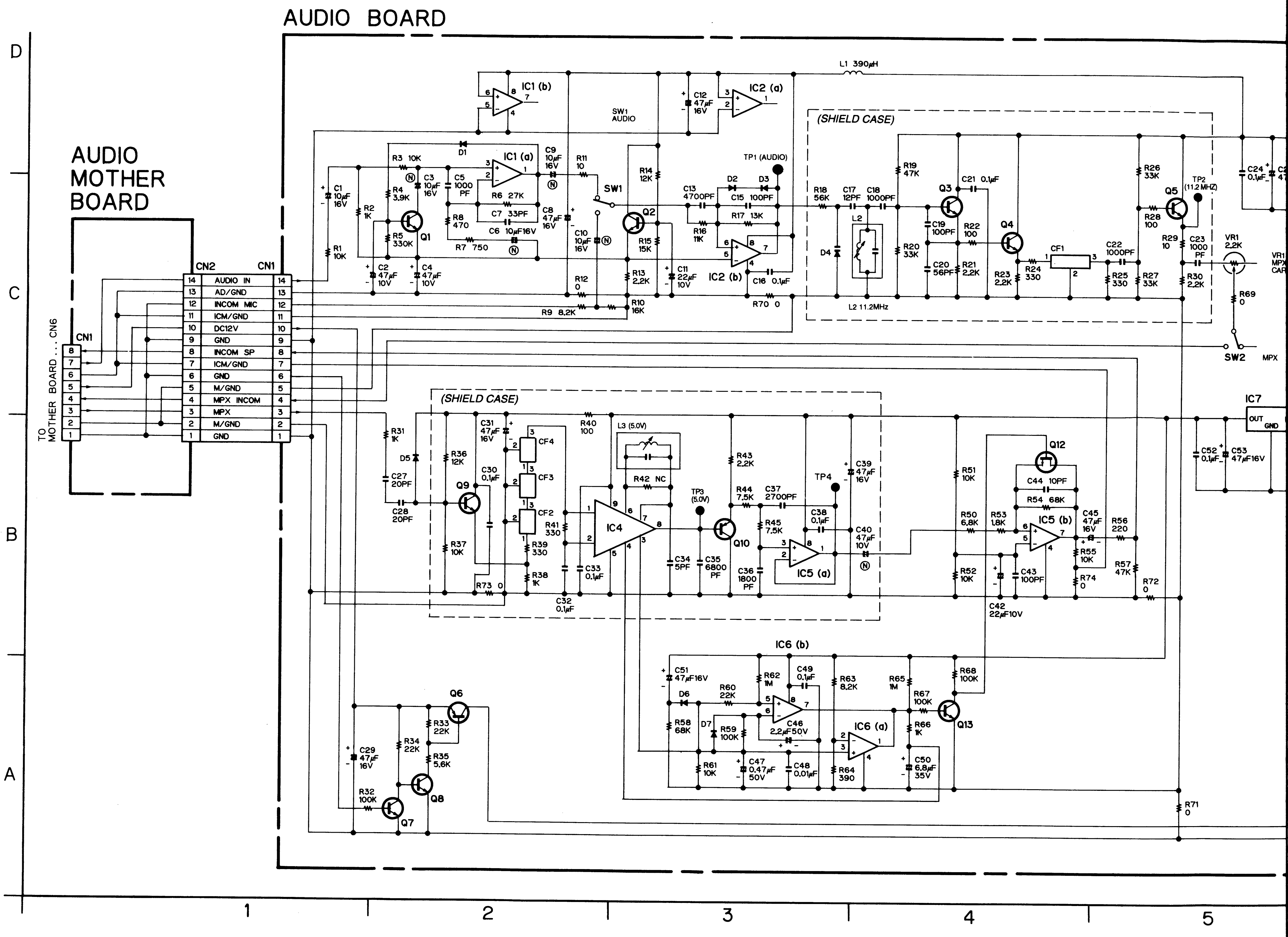
**< Index>**
**AUDIO BOARD**

| | |
|---|---|
| IC1 | C2, D2 |
| IC2 | C3, D3 |
| IC3 | D5 |
| IC4 | B2, B3 |
| IC5 | B3, B4 |
| IC6 | A3, A4 |
| IC7 | B5, C5 |
| Q1 | C2 |
| Q2 | C3 |
| Q3 | C4 |
| Q4 | C4 |
| Q5 | C5 |
| Q6 | A2 |
| Q7 | A2 |
| Q8 | A2 |
| Q9 | B2 |
| Q10 | B3 |
| Q12 | B4 |
| Q13 | B4 |
| D1 | D2 |
| D2 | C3 |
| D3 | C3 |
| D4 | C3 |
| D5 | B2 |
| D6 | A3 |
| D7 | A3 |

**AUDIO BOARD**

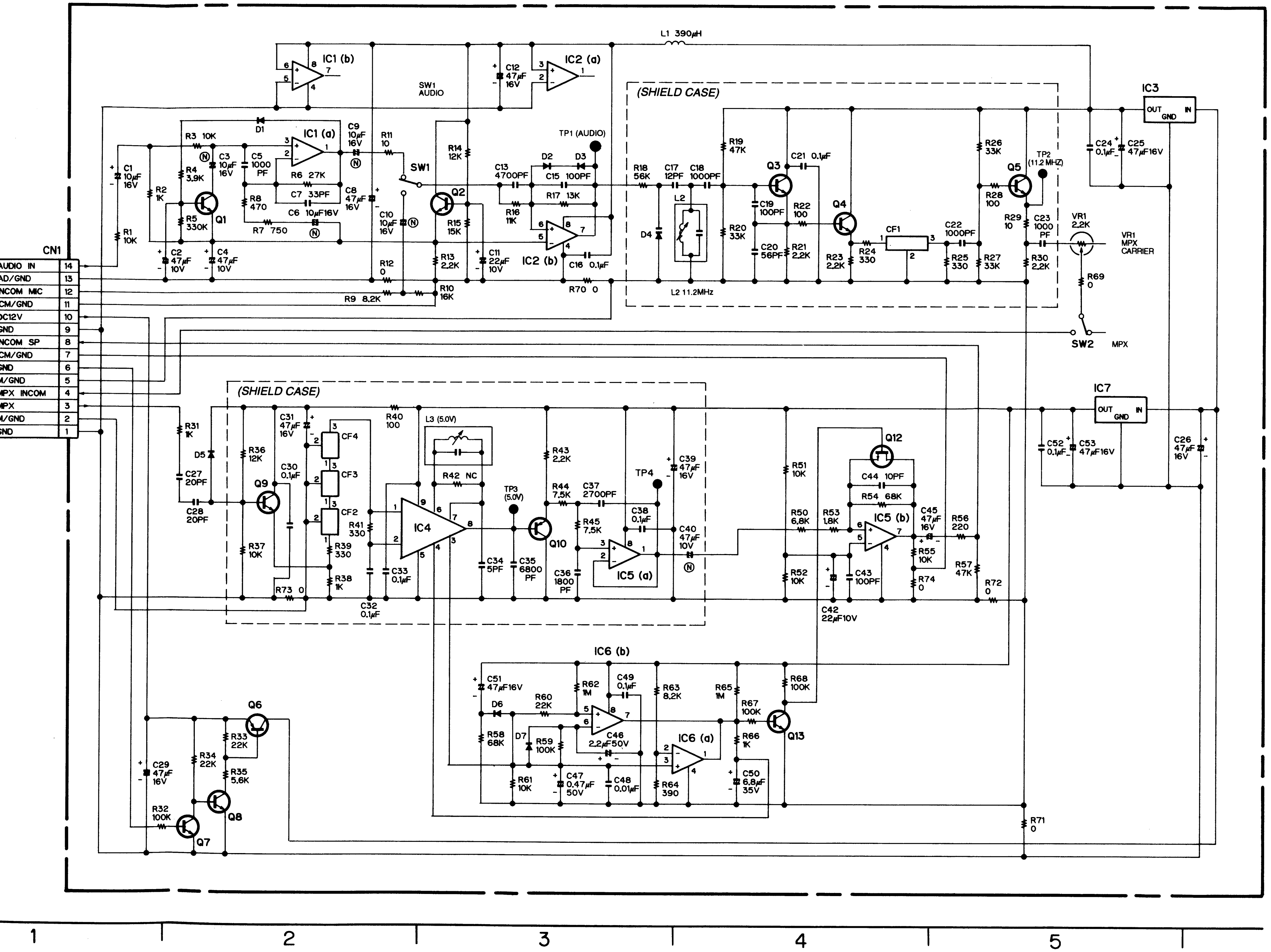
| | IC1 | IC2 | IC3 | IC4 | IC5 | IC6 | IC7 |
|---|---|---|---|---|---|---|---|
| Pin 1 | 4.3 | 8.4 | 9.1 | 1.9 | 5.7 | 1.4 | 9.2 |
| 2 | 4.3 | 0 | 0 | 1.8 | 5.7 | 0.4 | 0 |
| 3 | 4.3 | 8.9 | 11.9 | 1.5 | 5.7 | 1.3 | 11.9 |
| 4 | 0 | 0 | | 1.4 | 0 | 0 | |
| 5 | 0 | 4.3 | | 0 | 4.6 | 1.5 | |
| 6 | 8.9 | 4.3 | | 3.8 | 4.6 | 1.3 | |
| 7 | 8.0 | 4.3 | | 3.8 | 4.6 | 1.4 | |
| 8 | 8.9 | 8.9 | | 5.1 | 9.2 | 9.0 | |
| 9 | | | | 9.2 | | | |

| | B | C | E |
|---|---|---|---|
| Q1 | 4.3 | 4.0 | 4.4 |
| 2 | 5.0 | 9.1 | 4.4 |
| 3 | 3.3 | 9.1 | 2.8 |
| 4 | 2.8 | 9.1 | 6.0 |
| 5 | 4.2 | 9.1 | 3.7 |
| 6 | 11.0 | 11.9 | 12.0 |
| 7 | - | 0.7 | 0 |
| 8 | 0.7 | 0 | 0 |
| 9 | 3.9 | 8.8 | 3.2 |
| 10 | 5.1 | 0 | 5.7 |
| 11 | 4.6 | 0 | 4.6 |
| 1 | 0.6 | 0 | 0 |


AUDIO BOARD
AUDIO MOTHER BOARD
TO MOTHER BOARD ... CN6
CN1
CN2
14 AUDIO IN
13 AD/GND
12 INCOM MIC
11 ICM/GND
10 DC12V
9 GND
8 INCOM SP
7 ICM/GND
6 GND
5 M/GND
4 MPX INCOM
3 MPX
2 M/GND
1 GND
D C B A
1 2 3 4 5
IC1 (a)
IC1 (b)
IC2 (a)
IC2 (b)
IC4
IC5 (a)
IC5 (b)
IC6 (a)
IC6 (b)
IC7
OUT GND
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q12 Q13
SW1 AUDIO
SW2 MPX
TP1 (AUDIO)
TP2 (11.2 MHZ)
TP3 (5.0V)
TP4
L1 390μH
L2 11.2MHz
L3 (5.0V)
(SHIELD CASE)
CF1 CF2 CF3 CF4
VR1 2.2K
R42 NC
R73 0
R9 8.2K
R70 0
R71 0

# SCHEMATIC DIAGRAM OF AUDIO/AUDIO MOTHER BOARD (WV-PS550)

## AUDIO BOARD


CN1
UDIO IN 14
AD/GND 13
NCOM MIC 12
CM/GND 11
DC12V 10
GND 9
NCOM SP 8
CM/GND 7
GND 6
4/GND 5
MPX INCOM 4
MPX 3
4/GND 2
GND 1
IC1 (b)
IC1 (a)
IC2 (a)
IC2 (b)
IC3
IC4
IC5 (a)
IC5 (b)
IC6 (a)
IC6 (b)
IC7
OUT GND IN
SW1 AUDIO
SW1
SW2 MPX
L1 390μH
(SHIELD CASE)
TP1 (AUDIO)
TP2 (11.2 MHZ)
TP3 (5.0V)
TP4
L2 11.2MHz
L3 (5.0V)
CF1
CF2
CF3
CF4
VR1 2.2K
VR1 MPX CARRIER
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q12
Q13
D1
D2
D3
D4
D5
D6
D7
R1 10K
R2 1K
R3 10K
R4 3.9K
R5 330K
R6 27K
R7 750
R8 470
R9 8.2K
R10 16K
R11 10
R12 0
R13 2.2K
R14 12K
R15 15K
R16 11K
R17 13K
R18 56K
R19 47K
R20 33K
R21 2.2K
R22 100
R23 2.2K
R24 330
R25 330
R26 33K
R27 33K
R28 100
R29 10
R30 2.2K
R31 1K
R32 100K
R33 22K
R34 22K
R35 5.6K
R36 12K
R37 10K
R38 1K
R39 330
R40 100
R41 330
R42 NC
R43 2.2K
R44 7.5K
R45 7.5K
R50 6.8K
R51 10K
R52 10K
R53 1.8K
R54 68K
R55 10K
R56 220
R57 47K
R58 68K
R59 100K
R60 22K
R61 10K
R62 1M
R63 8.2K
R64 390
R65 1M
R66 1K
R67 100K
R68 100K
R69 0
R70 0
R71 0
R72 0
R73 0
R74 0
C1 10μF 16V
C2 47μF 10V
C3 10μF 16V
C4 47μF 10V
C5 1000 PF
C6 10μF16V
C7 33PF
C8 47μF 16V
C9 10μF 16V
C10 10μF 16V
C11 22μF 10V
C12 47μF 16V
C13 4700PF
C15 100PF
C16 0.1μF
C17 12PF
C18 1000PF
C19 100PF
C20 56PF
C21 0.1μF
C22 1000PF
C23 1000 PF
C24 0.1μF
C25 47μF16V
C26 47μF 16V
C27 20PF
C28 20PF
C29 47μF 16V
C30 0.1μF
C31 47μF 16V
C32 0.1μF
C33 0.1μF
C34 5PF
C35 6800 PF
C36 1800 PF
C37 2700PF
C38 0.1μF
C39 47μF 16V
C40 47μF 10V
C42 22μF10V
C43 100PF
C44 10PF
C45 47μF 16V
C46 2.2μF50V
C47 0.47μF 50V
C48 0.01μF
C49 0.1μF
C50 6.8μF 35V
C51 47μF16V
C52 0.1μF
C53 47μF16V
Ⓝ
1
2
3
4
5

**Note:** **The value indicated in the schematic diagram should be read as follows:**

□ □ □

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Significant Digit (1 - 9)

**<Example>**

For Resistor:

330 → $33 \times 10^0$ = 33 Ω

561 → $56 \times 10^1$ = 560 Ω

123 → $12 \times 10^3$ = 12k Ω

0R00 = 0 Ω

For Capacitor:

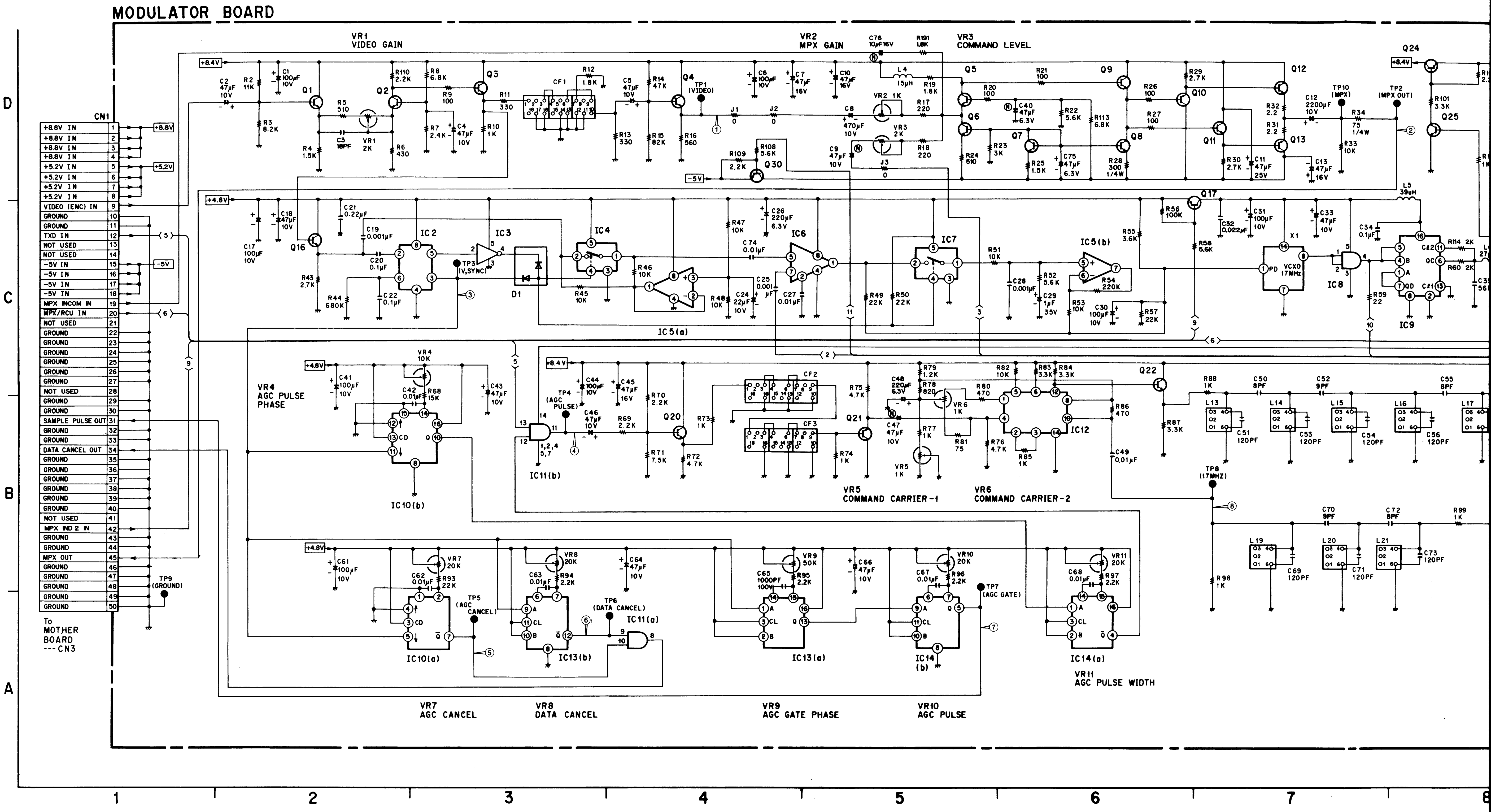
820 → $82 \times 10^0$ = 82 pF

102 → $10 \times 10^2$ = 1000 pF = 0.001 μF

104 → $10 \times 10^4$ = 100000 pF = 0.1 μF

The suffix attached to capacitance indicates a type of capacitor.

# SCHEMATIC DIAGRAM OF MODULATOR BOARD (WV-PS550)


MODULATOR BOARD
CN1
+8.8V IN 1
+8.8V IN 2
+8.8V IN 3
+8.8V IN 4
+5.2V IN 5
+5.2V IN 6
+5.2V IN 7
+5.2V IN 8
VIDEO (ENC) IN 9
GROUND 10
GROUND 11
TXD IN 12
NOT USED 13
NOT USED 14
-5V IN 15
-5V IN 16
-5V IN 17
-5V IN 18
MPX INCOM IN 19
MPX/RCU IN 20
NOT USED 21
GROUND 22–27
NOT USED 28
GROUND 29
GROUND 30
SAMPLE PULSE OUT 31
GROUND 32
GROUND 33
DATA CANCEL OUT 34
GROUND 35–40
NOT USED 41
MPX IND 2 IN 42
GROUND 43
GROUND 44
MPX OUT 45
GROUND 46–50
To MOTHER BOARD ---CN3
TP9 (GROUND)
VR1 VIDEO GAIN
VR2 MPX GAIN
VR3 COMMAND LEVEL
VR4 AGC PULSE PHASE
VR5 COMMAND CARRIER-1
VR6 COMMAND CARRIER-2
VR7 AGC CANCEL
VR8 DATA CANCEL
VR9 AGC GATE PHASE
VR10 AGC PULSE
VR11 AGC PULSE WIDTH
TP1 (VIDEO)
TP2 (MPX OUT)
TP3 (V,SYNC)
TP4 (AGC PULSE)
TP5 (AGC CANCEL)
TP6 (DATA CANCEL)
TP7 (AGC GATE)
TP8 (17MHZ)
TP10 (MPX)
IC2 IC3 IC4 IC5(a) IC5(b) IC6 IC7 IC8 IC9 IC10(a) IC10(b) IC11(a) IC11(b) IC12 IC13(a) IC13(b) IC14(a) IC14(b)
X1 VCXO 17MHz
CF1 CF2 CF3
D1
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q16 Q17 Q20 Q21 Q22 Q24 Q25 Q30
+8.4V +4.8V -5V +8.8V +5.2V
A B C D
1 2 3 4 5 6 7 8

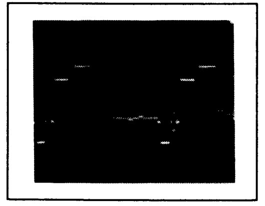
## < Index>

### MODULATOR BOARD

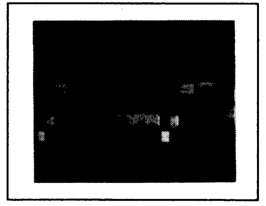
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IC1 | C9, D9 | IC9 | C7, C8 | Q3 | D3 | Q11 | D7 | Q19 | C9 | Q27 | C9 |
| IC2 | C2, C3 | IC10 | A2/B2, A3 | Q4 | D4 | Q12 | D7 | Q20 | B4 | Q28 | B9 |
| IC3 | C3 | IC11 | B3/A4 | Q5 | D5 | Q13 | D7 | Q21 | B5 | Q29 | B10 |
| IC4 | C3, C4 | IC12 | B6 | Q6 | D5 | Q14 | D8 | Q22 | C6 | Q30 | D4 |
| IC5 | C4/C6 | IC13 | A3/A4, A5 | Q7 | D6 | Q15 | D8 | Q23 | C9 | D1 | C3 |
| IC6 | C4,C5 | IC14 | A5/A6 | Q8 | D6 | Q16 | C2 | Q24 | D8 | | |
| IC7 | C5 | Q1 | D2 | Q9 | D6 | Q17 | C6, C7 | Q25 | D8 | | |
| IC8 | C7 | Q2 | D2 | Q10 | D7 | Q18 | C9 | Q26 | C9 | | |

## <Waveform>

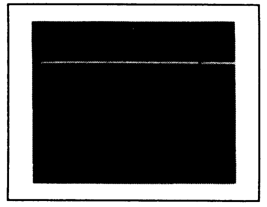
1. 10μsec/DIV, 0.2V/DIV



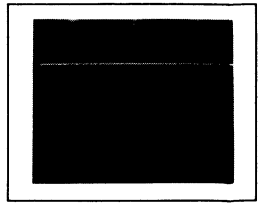
2. 10μsec/DIV, 0.5V/DIV



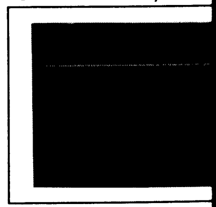
3. 2msec/DIV, 1V/DIV



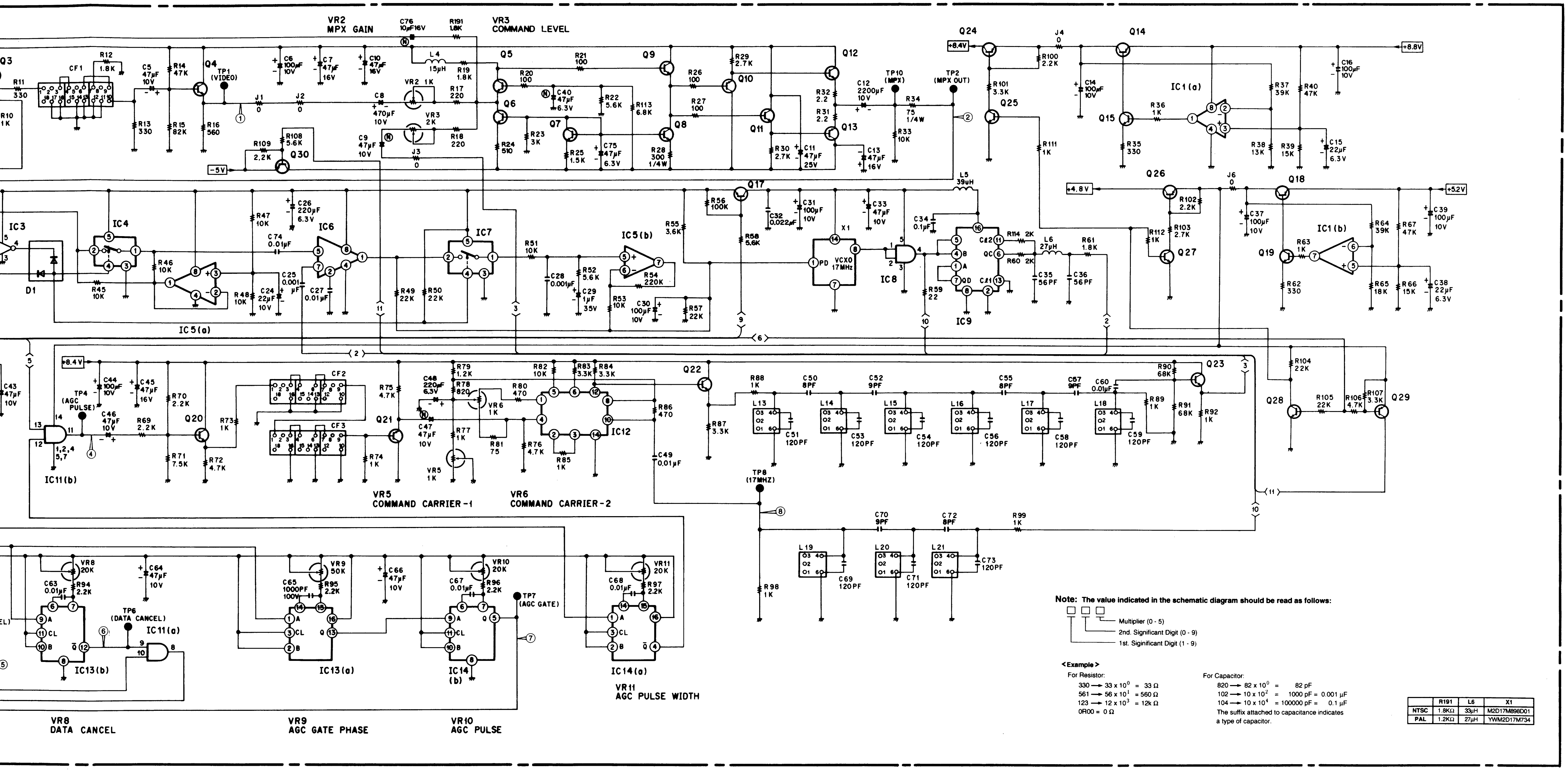
4. 2msec/DIV, 1V/DIV



5. 2msec/DIV, 1V/D



# SCHEMATIC DIAGRAM OF MODULATOR BOARD (WV-PS550)


VR2
MPX GAIN
VR3
COMMAND LEVEL
TP1 (VIDEO)
TP10 (MPX)
TP2 (MPX OUT)
TP4 (AGC PULSE)
TP8 (17MHZ)
TP6 (DATA CANCEL)
TP7 (AGC GATE)
VCXO 17MHz
IC1(a)
IC1(b)
IC3
IC4
IC5(a)
IC5(b)
IC6
IC7
IC8
IC9
IC11(a)
IC11(b)
IC12
IC13(a)
IC13(b)
IC14(a)
IC14(b)
+8.4V
+8.8V
+4.8V
+5.2V
-5V
VR5
COMMAND CARRIER-1
VR6
COMMAND CARRIER-2
VR8
DATA CANCEL
VR9
AGC GATE PHASE
VR10
AGC PULSE
VR11
AGC PULSE WIDTH

**Note:** **The value indicated in the schematic diagram should be read as follows:**

□ □ □

- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Siginificant Digit (1 - 9)

**<Example>**

For Resistor:

330 → 33 x $10^0$ = 33 Ω
561 → 56 x $10^1$ = 560 Ω
123 → 12 x $10^3$ = 12k Ω
0R00 = 0 Ω

For Capacitor:

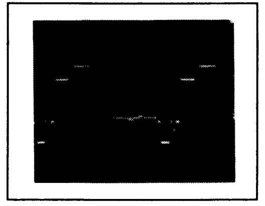
820 → 82 x $10^0$ = 82 pF
102 → 10 x $10^2$ = 1000 pF = 0.001 µF
104 → 10 x $10^4$ = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.

| | R191 | L6 | X1 |
|---|---|---|---|
| NTSC | 1.8KΩ | 33µH | M2D17M898D01 |
| PAL | 1.2KΩ | 27µH | YWM2D17M734 |

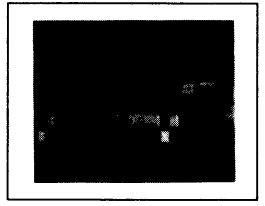
3 4 5 6 7 8 9 10

## <Waveform>

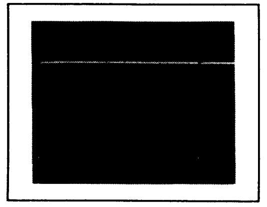
1. 10µsec/DIV, 0.2V/DIV



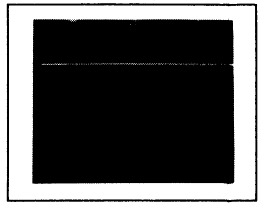
2. 10µsec/DIV, 0.5V/DIV



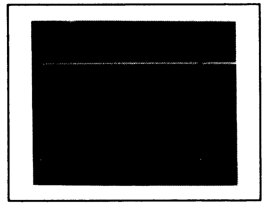
3. 2msec/DIV, 1V/DIV



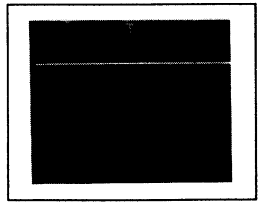
4. 2msec/DIV, 1V/DIV



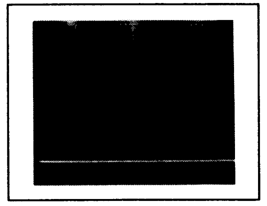
5. 2msec/DIV, 1V/DIV



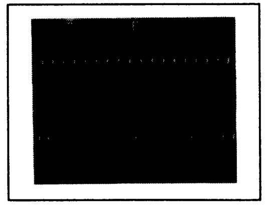
6. 2msec/DIV, 1V/DIV



7. 2msec/DIV, 1V/DIV



8. 0.1msec/DIV, 0.2V/DIV



| | | |
|---|---|---|
| C9 | Q27 | C9 |
| B4 | Q28 | B9 |
| B5 | Q29 | B10 |
| C6 | Q30 | D4 |
| C9 | D1 | C3 |
| D8 | | |
| D8 | | |
| C9 | | |

# CONDUCTOR VIEW OF MODULATOR BOARD (WV-PS550)

< Voltages >

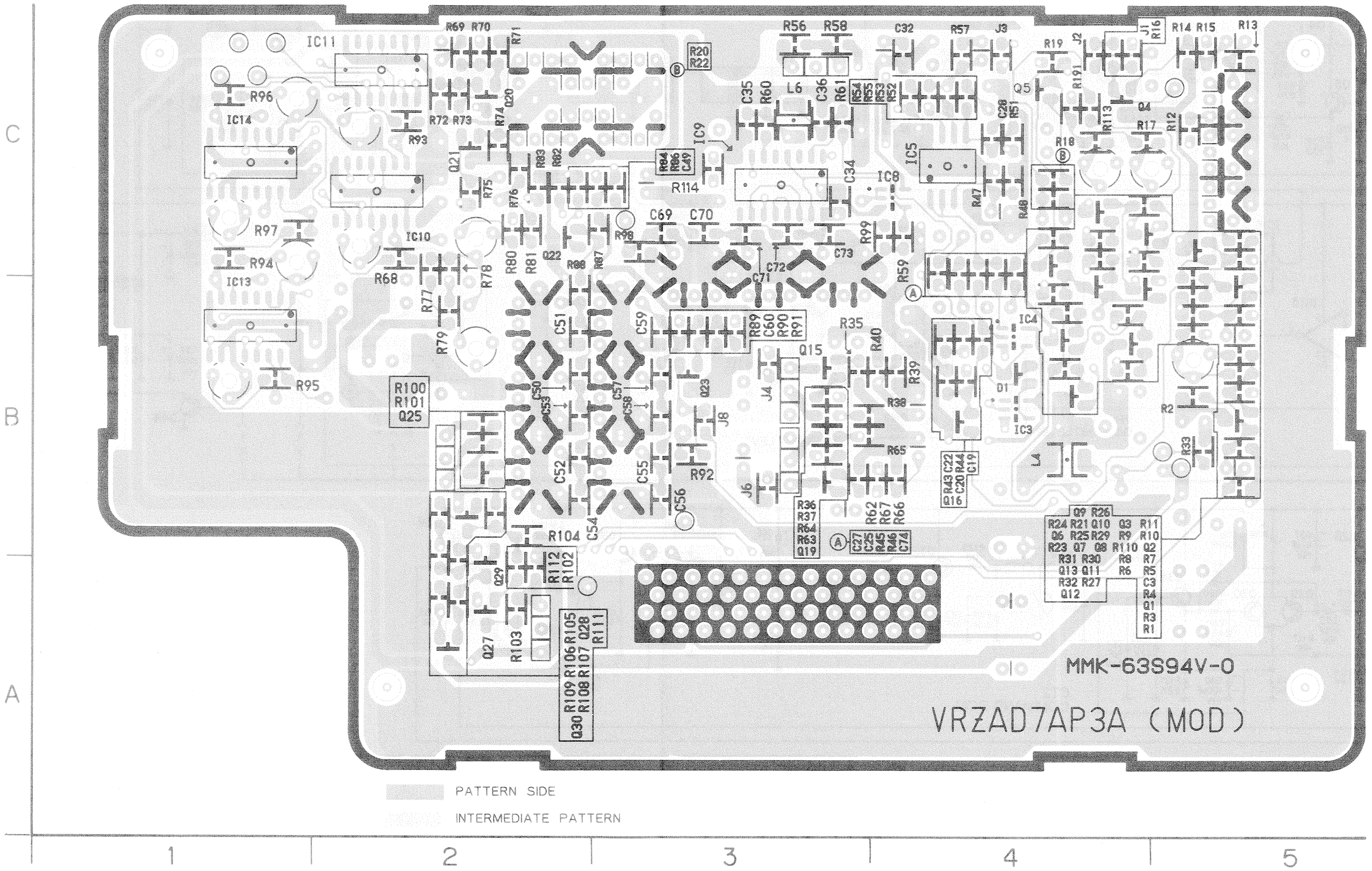
| | IC1 | IC2 | IC3 | IC4 | IC5 | IÇ6 | IC7 | IC8 | IC9 | IC10 | IC11 | IC12 | IC13 | IC14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 0 | 0 | 0 | 2.5 | 2.5 | 4.2 | 4.1 | 0 | 0 | 0 | 0 | 3.1 | 4.9 | 0 |
| 2 | 2.1 | | 4.6 | 0.3 | 0.4 | 2.5 | 4.2 | 0 | 0 | 5.0 | 0 | 2.4 | 5.0 | 5.0 |
| 3 | 0 | 4.9 | 0.2 | 0 | 2.5 | 1.8 | 0 | 0 | 0 | 5.0 | 0 | 0 | 5.0 | 0 |
| 4 | 0 | 0 | 0.3 | 0.8 | 0 | 0 | 0.8 | 0 | 0 | 0 | 0 | 3.1 | 5.0 | 5.0 |
| 5 | 1.2 | 0 | 5.0 | 5.0 | 4.2 | 1.8 | 0 | 0.1 | 0 | 4.9 | 0 | 1.0 | 0 | 0 |
| 6 | 1.6 | 1.2 | | | 4.2 | 2.5 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0.7 | 2.5 | | | 2.9 | 2.5 | | | 0 | 0 | 0 | 0 | 4.9 | 5.0 |
| 8 | 0 | 5.0 | | | 5.0 | 5.0 | | | 0 | 0 | 4.9 | 5.3 | 0 | 0 |
| 9 | | | | | | | | | 0 | 5.0 | 0 | 0 | 4.9 | 0 |
| 10 | | | | | | | | | 0 | 0 | 0 | 5.3 | 5.0 | 5.0 |
| 11 | | | | | | | | | 0 | 0 | 5.0 | 0 | 5.0 | 5.0 |
| 12 | | | | | | | | | 0 | 5.0 | 5.0 | 5.9 | 0 | 0 |
| 13 | | | | | | | | | 0 | 5.0 | 5.0 | 0 | 0 | 0 |
| 14 | | | | | | | | | 0 | 5.0 | 0 | 0 | 0 | 0 |
| 15 | | | | | | | | | 0 | 0 | | | 5.0 | 4.9 |
| 16 | | | | | | | | | 0 | 5.0 | | | 5.0 | 5.0 |

| | B | C | E |
|---|---|---|---|
| Q1 | 3.5 | 8.6 | 2.7 |
| 2 | 2.2 | 4.0 | 1.4 |
| 3 | 4.0 | 0.2 | 3.2 |
| 4 | 0.3 | 8.6 | 4.1 |
| 5 | -2.4 | 1.6 | 0.5 |
| 6 | -2.9 | -3.1 | -3.7 |
| 7 | -2.9 | -2.9 | 0.3 |
| 8 | -2.9 | 0.9 | 0.3 |
| 9 | 0.3 | 8.6 | 0.9 |
| 10 | 0.9 | -4.9 | 0.3 |
| 11 | 0.9 | 8.5 | 0.1 |
| 12 | 1.6 | 8.6 | 0.9 |
| 13 | 0.4 | -4.9 | 0.9 |
| 14 | 8.0 | 8.6 | 8.7 |
| 15 | 0.7 | 8.0 | 0.1 |

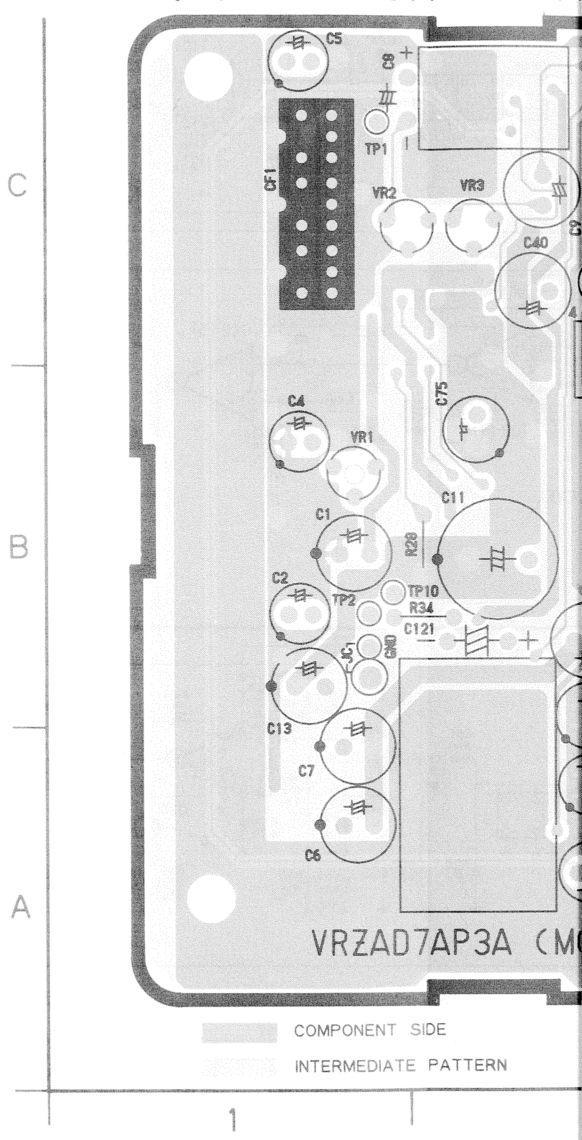
| | B | C | E |
|---|---|---|---|
| 16 | 3.2 | 5.0 | 2.6 |
| 17 | 4.9 | 0 | 5.0 |
| 18 | 4.5 | 5.0 | 5.1 |
| 19 | 0.7 | 4.5 | 0 |
| 20 | 0 | 8.6 | 5.9 |
| 21 | 2.9 | 0 | 0 |
| 22 | 5.9 | 0 | 5.1 |
| 23 | 3.4 | 8.6 | 2.7 |
| 24 | 7.9 | 8.6 | 8.6 |
| 25 | 0.6 | 0 | 0 |
| 26 | 4.4 | 5.0 | 5.0 |
| 27 | 0.6 | 0 | 0 |
| 28 | 0 | 0.7 | 0 |
| 29 | 4.3 | 5.0 | 5.0 |
| 30 | -4.2 | 0 | 0 |

MODULATOR BOARD

(PATTERN SIDE VIEW)


C
B
A
1
2
3
4
5
IC11
IC14
IC13
IC10
IC9
IC5
IC8
IC4
IC3
R96
R97
R94
R95
R93
R68
R100
R101
Q25
R114
C69
C70
C71
C72
C73
R35
Q15
R92
R104
R112
R102
R103
Q27
Q29
R109 R105
R108 R107 Q28
Q30
R111
MMK-63S94V-0
VRZAD7AP3A (MOD)
PATTERN SIDE
INTERMEDIATE PATTERN

MODULATOR BOAR


C
B
A
1
CF1
C5
TP1
VR2
VR3
C40
C4
VR1
C75
C1
C11
C2
TP2
TP10
R34
C121
C13
C7
C6
VRZAD7AP3A (M
COMPONENT SIDE
INTERMEDIATE PATTERN

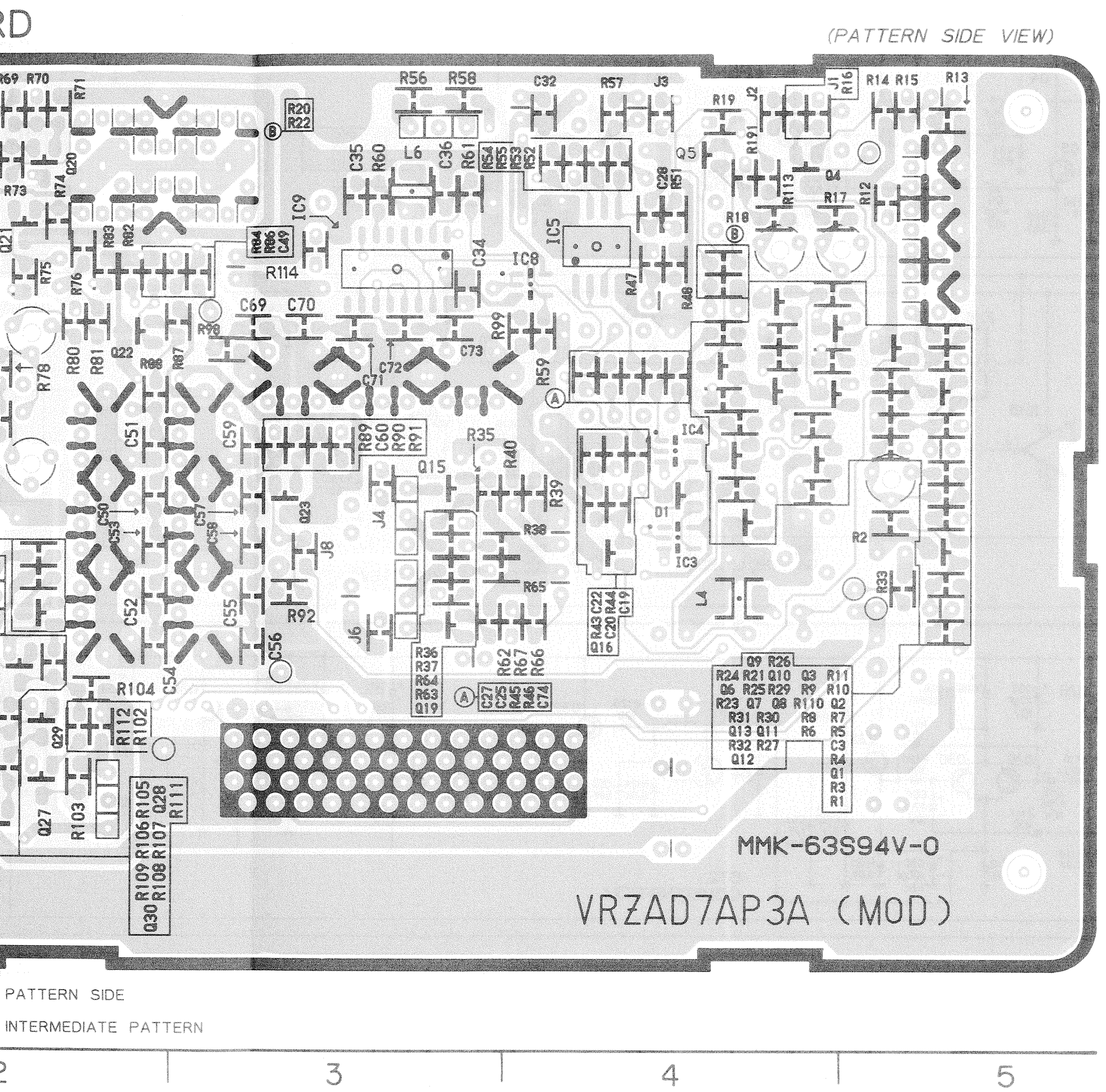
< Index>
MODULATOR BOARD
PATTERN SIDE

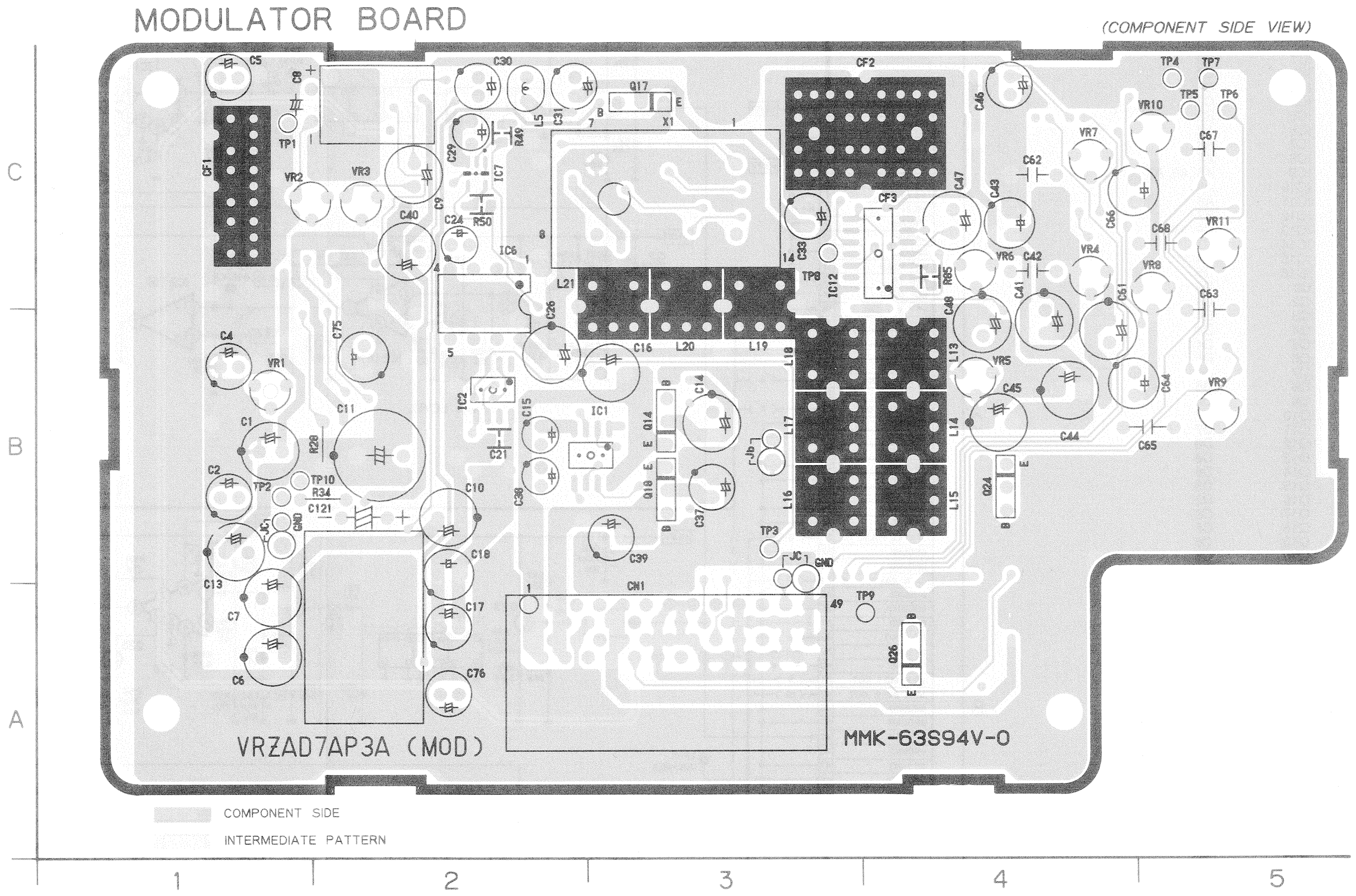
| | | | |
|---|---|---|---|
| IC3 | B4 | Q10 | C4 |
| IC4 | B4 | Q11 | B4 |
| IC5 | C4 | Q12 | B4 |
| IC8 | C4 | Q13 | B4 |
| IC9 | C3 | Q15 | B3 |
| IC10 | C2 | Q16 | B4 |
| IC11 | C2 | Q19 | B2 |
| IC13 | B1 | Q20 | C2 |
| IC14 | C1 | Q21 | C2 |
| Q1 | B5 | Q22 | C2 |
| Q2 | B5 | Q23 | B3 |
| Q3 | C3 | Q25 | B2 |
| Q4 | C4 | Q27 | A2 |
| Q5 | C4 | Q28 | B2 |
| Q6 | B4 | Q29 | A2 |
| Q7 | B4 | Q30 | A2 |
| Q8 | B4 | D1 | B4 |
| Q9 | C4 | | |

< Index>
MODULATOR BOARD
COMPONENT SIDE

| | |
|---|---|
| IC1 | B2,B3 |
| IC2 | B2 |
| IC6 | B2,C2 |
| IC7 | C2 |
| IC12 | C4 |
| Q14 | B3 |
| Q17 | C3 |
| Q18 | B3 |
| Q24 | B4 |
| Q26 | A4 |

# CONDUCTOR VIEW OF MODULATOR BOARD (WV-PS550)


RD
(PATTERN SIDE VIEW)
MMK-63S94V-0
VRZAD7AP3A (MOD)
PATTERN SIDE
INTERMEDIATE PATTERN
2
3
4
5


MODULATOR BOARD
(COMPONENT SIDE VIEW)
C
B
A
VRZAD7AP3A (MOD)
MMK-63S94V-0
COMPONENT SIDE
INTERMEDIATE PATTERN
1
2
3
4
5

< Index>

**MODULATOR BOARD**

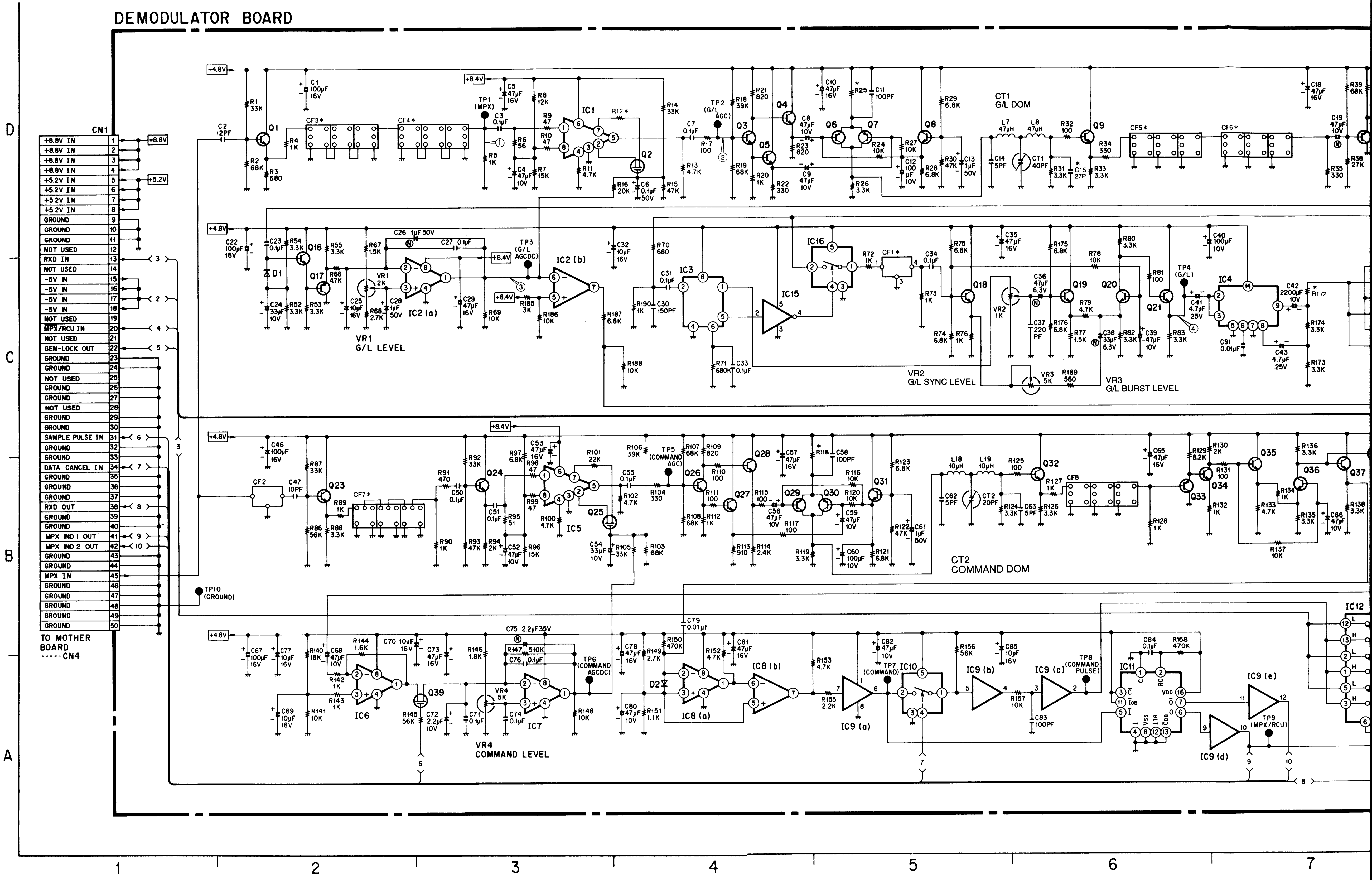
**COMPONENT SIDE**

| | |
|---|---|
| IC1 | B2,B3 |
| IC2 | B2 |
| IC6 | B2,C2 |
| IC7 | C2 |
| IC12 | C4 |
| Q14 | B3 |
| Q17 | C3 |
| Q18 | B3 |
| Q24 | B4 |
| Q26 | A4 |

# SCHEMATIC DIAGRAM OF DEMODULATOR BOARD (WV-PS550)

## < Index>
## DEMODULATOR BOARD

| | |
|---|---|
| IC1 | D3 |
| IC2 | C3 |
| IC3 | C4 |
| IC4 | C7 |
| IC5 | B3 |
| IC6 | A2 |
| IC7 | A3 |
| IC8 | A4 |
| IC9 | A5, A6, A7 |
| IC10 | A5 |
| IC11 | A6 |
| IC12 | B7 |
| IC13 | C9, A9 |
| IC14 | C7 |
| IC15 | C4 |
| IC16 | D5 |
| Q1 | D2 |
| Q2 | D4 |
| Q3 | D4 |
| Q4 | D4 |
| Q5 | D4 |
| Q6 | D5 |
| Q7 | D5 |
| Q8 | D5 |
| Q9 | D6 |
| Q10 | D7 |
| Q11 | D7 |
| Q12 | D8 |
| Q13 | D8 |
| Q14 | D8 |
| Q15 | D8 |
| Q16 | D2 |
| Q17 | C2 |
| Q18 | C5 |
| Q19 | C6 |
| Q20 | C6 |
| Q21 | C6 |
| Q23 | B2 |
| Q24 | B3 |
| Q25 | B3 |
| Q26 | B4 |
| Q27 | B4 |
| Q28 | B4 |
| Q29 | B4 |
| Q30 | B5 |
| Q31 | B5 |
| Q32 | B6 |
| Q33 | B6 |
| Q34 | B7 |
| Q35 | B7 |
| Q36 | B7 |
| Q37 | B7 |
| Q38 | C7 |
| Q39 | A3 |
| Q40 | C9 |
| Q41 | C9 |
| Q42 | Q9 |
| Q43 | A9 |
| Q44 | C8 |
| Q45 | C9 |
| Q46 | C9 |
| Q47 | A9 |
| Q48 | B9 |
| D1 | C2 |
| D2 | A4 |


DEMODULATOR BOARD
CN1
+8.8V IN
+5.2V IN
GROUND
NOT USED
RXD IN
-5V IN
MPX/RCU IN
GEN-LOCK OUT
SAMPLE PULSE IN
DATA CANCEL IN
RXD OUT
MPX IND 1 OUT
MPX IND 2 OUT
MPX IN
TO MOTHER BOARD
-----CN4
+4.8V
+8.4V
+8.8V
+5.2V
TP1 (MPX)
TP2 (G/L AGC)
TP3 (G/L AGCDC)
TP4 (G/L)
TP5 (COMMAND AGC)
TP6 (COMMAND AGCDC)
TP7 (COMMAND)
TP8 (COMMAND PULSE)
TP9 (MPX/RCU)
TP10 (GROUND)
CT1 G/L DOM
CT2 COMMAND DOM
VR1 G/L LEVEL
VR2 G/L SYNC LEVEL
VR3 G/L BURST LEVEL
VR4 COMMAND LEVEL
IC1
IC2 (a)
IC2 (b)
IC3
IC4
IC5
IC6
IC7
IC8 (a)
IC8 (b)
IC9 (a)
IC9 (b)
IC9 (c)
IC9 (d)
IC9 (e)
IC10
IC11
IC12
IC15
IC16
D
C
B
A
1
2
3
4
5
6
7

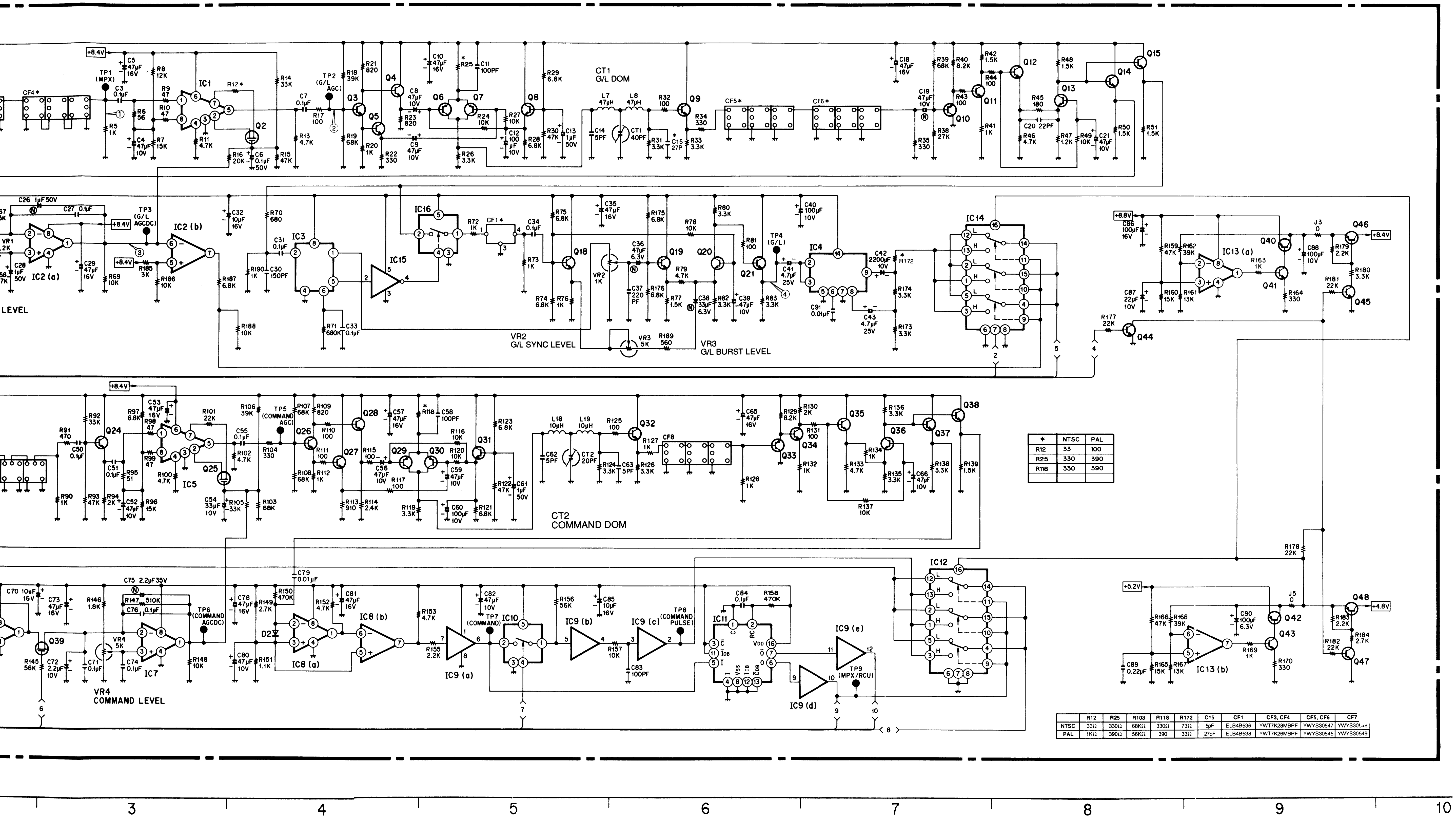
Note: The value indicated in th

Multiplier (0 - 5)

2nd. Significant D

1st. Significant D

# SCHEMATIC DIAGRAM OF DEMODULATOR BOARD (WV-PS550)


+8.4V
TP1 (MPX)
CF4*
IC1
R12*
Q2
Q3
Q4
Q5
Q6
Q7
Q8
TP2 (G/L AGC)
CT1 G/L DOM
L7 47μH
L8 47μH
Q9
CF5*
CF6*
Q10
Q11
Q12
Q13
Q14
Q15
TP3 (G/L AGCDC)
IC2 (a)
IC2 (b)
VR1
LEVEL
IC3
IC5
IC16
CF1*
Q18
Q19
Q20
Q21
TP4 (G/L)
IC4
VR2 G/L SYNC LEVEL
VR3 G/L BURST LEVEL
IC14
+8.8V
IC13 (a)
Q40
Q41
Q44
Q45
Q46
J3 0
+8.4V
Q24
IC5
Q25
TP5 (COMMAND AGC)
Q26
Q27
Q28
Q29
Q30
Q31
L18 10μH
L19 10μH
Q32
CF8
CT2 COMMAND DOM
Q33
Q34
Q35
Q36
Q37
Q38
C75 2.2μF35V
TP6 (COMMAND AGCDC)
Q39
VR4 COMMAND LEVEL
IC7
D2
IC8 (a)
IC8 (b)
TP7 (COMMAND)
IC9 (a)
IC10
IC9 (b)
IC9 (c)
TP8 (COMMAND PULSE)
IC11
IC9 (d)
IC9 (e)
TP9 (MPX/RCU)
IC12
+5.2V
J5 0
Q42
Q43
IC13 (b)
Q47
Q48
+4.8V
3
4
5
6
7
8
9
10

| * | NTSC | PAL |
|---|---|---|
| R12 | 33 | 100 |
| R25 | 330 | 390 |
| R118 | 330 | 390 |
| | | |

| | R12 | R25 | R103 | R118 | R172 | C15 | CF1 | CF3, CF4 | CF5, CF6 | CF7 |
|---|---|---|---|---|---|---|---|---|---|---|
| NTSC | 33Ω | 330Ω | 68KΩ | 330Ω | 73Ω | 5pF | ELB4B536 | YWT7K28MBPF | YWYS30547 | YWYS30548 |
| PAL | 1KΩ | 390Ω | 56KΩ | 390 | 33Ω | 27pF | ELB4B538 | YWT7K26MBPF | YWYS30545 | YWYS30549 |

**Note: The value indicated in the schematic diagram should be read as follows:**

□ □ □
- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Siginificant Digit (1 - 9)

**<Example>**

For Resistor:

330 → $33 \times 10^0$ = 33 Ω
561 → $56 \times 10^1$ = 560 Ω
123 → $12 \times 10^3$ = 12k Ω
0R00 = 0 Ω

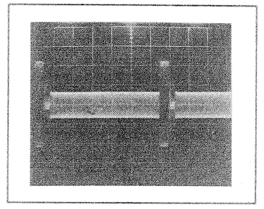
For Capacitor:

820 → $82 \times 10^0$ = 82 pF
102 → $10 \times 10^2$ = 1000 pF = 0.001 μF
104 → $10 \times 10^4$ = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

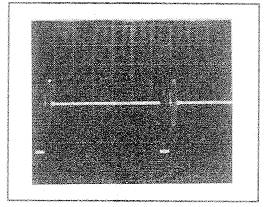
# CONDUCTOR VIEW OF DEMODULATOR BOARD (WV-PS550)

## <Waveform>

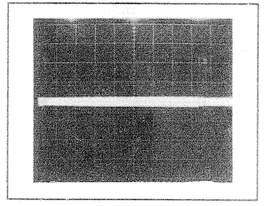
1. 10μsec/DIV, 0.1V/DIV



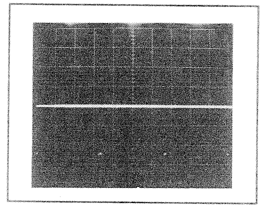
2. 10μsec/DIV, 0.2V/DIV



3. 2msec/DIV, 0.1V/DIV



4. 5msec/DIV, 2V/DIV



<Voltages>

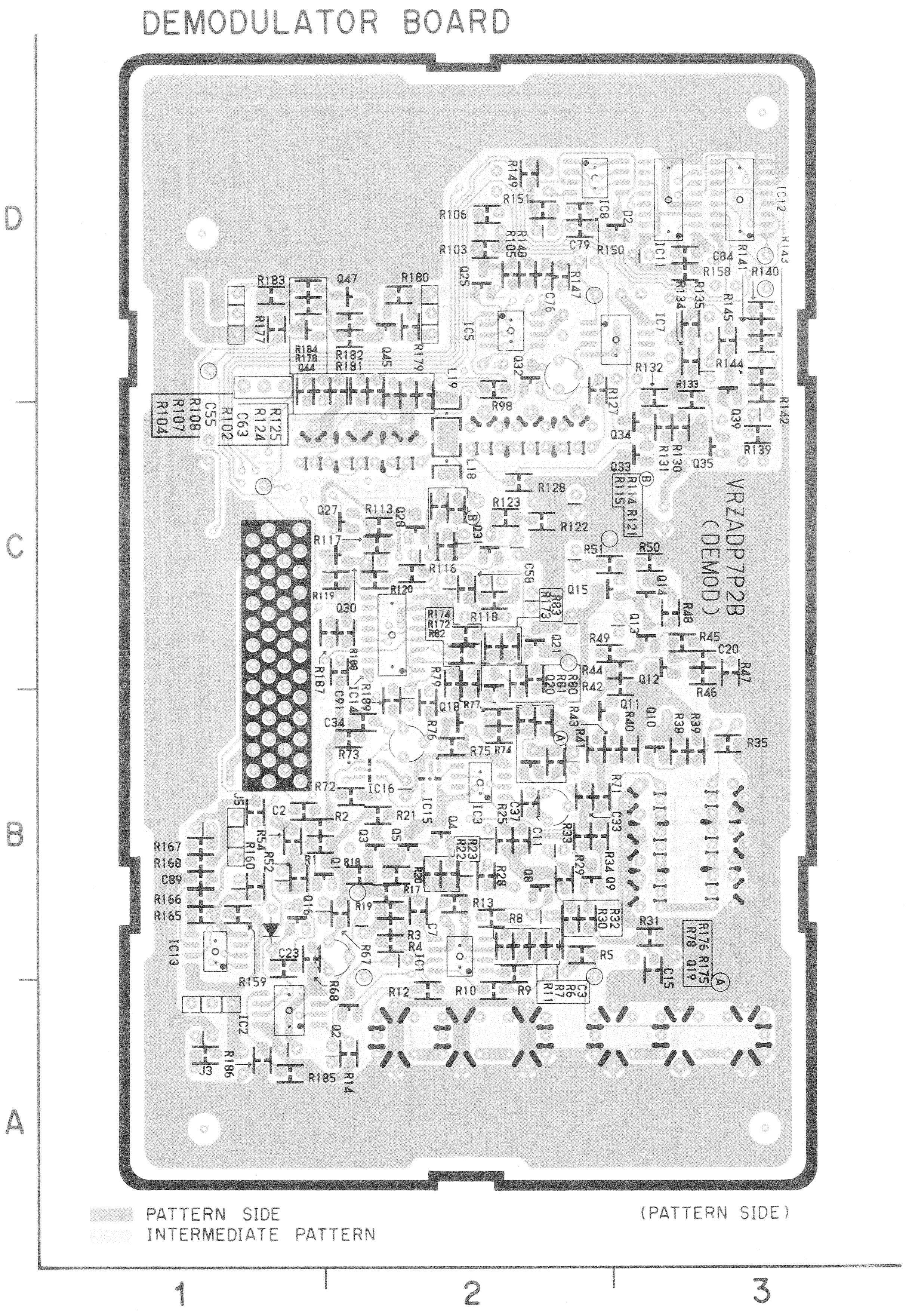
| | IC1 | IC2 | IC3 | IC4 | IC5 | IC6 | IC7 | IC8 | IC9 | IC10 | IC11 | IC12 | IC13 | IC14 | IC15 | IC16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pin 1 | 5.0 | 7.2 | 0 | 1.6 | 3.3 | 1.8 | 3.6 | 0 | 4.9 | 4.9 | 0 | 4.9 | 0 | 0 | 0 | 0.7 |
| 2 | 3.9 | 2.2 | 1.5 | 1.2 | 2.6 | 1.8 | 41.8 | 1.8 | 4.9 | 0 | 4.9 | 5.1 | 2.1 | 0 | 4.9 | 3.1 |
| 3 | 0 | 3.3 | 0 | 1.2 | 0 | 1.8 | 3.0 | 1.4 | 4.9 | 0 | 4.9 | 4.9 | 2.1 | 0 | 0 | 0 |
| 4 | 6.2 | 0 | 0 | 2.4 | 6.3 | 0 | 0 | 0 | 4.9 | 4.9 | 0 | 51 | 0 | 0 | 0 | 0 |
| 5 | 0 | 6.7 | 0.3 | 0 | 6.4 | 1.8 | 0 | 1.4 | 4.9 | 4.9 | 4.9 | 5.1 | 1.2 | 0 | 4.9 | 4.9 |
| 6 | 0 | 7.2 | 1.2 | 2.4 | 8.6 | 0 | 0 | 0 | 4.9 | | 0 | 0 | 1.2 | 0 | | |
| 7 | 4.6 | 0 | 0 | 0 | 2.6 | 4.7 | 3.6 | 4.9 | 4.9 | | 4.9 | 0 | 2.1 | -5.0 | | |
| 8 | 4.6 | 8.6 | 4.9 | 1.3 | 0 | 4.9 | 4.9 | 4.9 | 0 | | 0 | 0 | 8.7 | 0 | | |
| 9 | | | | 1.0 | | | | | 0 | | 4.9 | 0 | | 0.4 | | |
| 10 | | | | 1.7 | | | | | 0 | | 0 | 0 | | 0 | | |
| 11 | | | | 1. | | | | | 4.9 | | 4.9 | 0 | | 0 | | |
| 12 | | | | 0.1 | | | | | 4.9 | | 0 | 5.1 | | 0.4 | | |
| 13 | | | | 0 | | | | | 0 | | 0 | 4.9 | | 0 | | |
| 14 | | | | 0 | | | | | 0.7 | | 4.9 | 5.1 | | 0 | | |
| 15 | | | | | | | | | 0 | | 0 | 5.1 | | 0 | | |
| 16 | | | | | | | | | 0 | | 4.9 | 5.1 | | 5.1 | | |

| | B | C | E |
|---|---|---|---|
| Q1 | 2.5 | 4.9 | 1.7 |
| 2 | 3.9 | 4.6 | 0 |
| 3 | 2.7 | 3.3 | 1.9 |
| 4 | 3.3 | 4.9 | 2.6 |
| 5 | 1.9 | 4.9 | 1.2 |
| 6 | 3.8 | 2.3 | 4.5 |
| 7 | 3.8 | 2.3 | 4.5 |
| 8 | 4.3 | 4.9 | 3.7 |
| 9 | 2.3 | 4.9 | 1.7 |
| 10 | 1.5 | 0 | 2.1 |
| 11 | 2.1 | 2.8 | 1.4 |
| 12 | 2.8 | 4.9 | 2.2 |
| 13 | 2.7 | 3.7 | 2.0 |
| 14 | 3.7 | 4.9 | 3.1 |
| 15 | 3.7 | 4.9 | 3.1 |
| 16 | 2.1 | 4.9 | 1.6 |
| 17 | 1.5 | 0 | 2.2 |
| 18 | 2.4 | 4.9 | 1.7 |
| 19 | 2.4 | 4.9 | 1.7 |
| 20 | 2.3 | 3.3 | 1.6 |
| 21 | 3.3 | 4.9 | 2.0 |

| | B | C | E |
|---|---|---|---|
| 23 | 2.6 | 4.9 | 1.9 |
| 24 | 2.7 | 4.9 | 1.9 |
| 25 | 2.6 | 3.2 | 2.6 |
| 26 | 2.0 | 0 | 1.3 |
| 27 | 1.3 | 4.9 | 0.6 |
| 28 | 3.9 | 4.9 | 3.1 |
| 29 | 3.6 | 2.9 | 0 |
| 31 | 4.3 | 4.9 | 3.6 |
| 33 | 1.1 | 0 | 1.8 |
| 34 | 1.8 | 2.6 | 1.1 |
| 35 | 2.6 | 4.9 | 2.0 |
| 36 | 2.6 | 0 | 1.9 |
| 37 | 3.5 | 4.9 | 2.9 |
| 38 | 3.5 | 4.9 | 2.8 |
| 39 | 1.8 | 0 | 1.8 |
| 41 | 0.7 | 8.1 | 0.1 |
| 44 | 0 | 0 | 0 |
| 45 | 0.6 | 0 | 0 |
| 46 | 8.0 | 8.6 | 8.7 |
| 47 | 0.6 | 0 | 0 |
| 48 | 0 | 4.9 | 5.0 |

< Index>
**DEMODULATOR BOARD**
**PATTERN SIDE**

| | |
|---|---|
| IC1 | B2 |
| IC2 | A1 |
| IC3 | B2 |
| IC5 | D2 |
| IC7 | D2,D3 |
| IC8 | D2 |
| IC11 | D3 |
| IC12 | D3 |
| IC13 | B1 |
| IC14 | C2 |
| IC15 | B2 |
| IC16 | B2 |
| Q1 | B1 |
| Q2 | A2 |
| Q3 | B2 |
| Q4 | B2 |
| Q5 | B2 |
| Q8 | B2 |
| Q9 | B2 |
| Q10 | B3 |
| Q11 | B2 |
| Q12 | C3 |
| Q13 | C3 |
| Q14 | C3 |
| Q15 | C2 |
| Q16 | B2 |
| Q18 | B2 |
| Q19 | B2 |
| Q20 | C2 |
| Q21 | C2 |
| Q25 | D2 |
| Q27 | C1,C2 |
| Q28 | C2 |
| Q30 | C1,C2 |
| Q31 | C2 |
| Q32 | D2 |
| Q33 | C3 |
| Q34 | C3 |
| Q35 | C3 |
| Q39 | D3 |
| Q44 | D1 |
| Q45 | D2 |
| Q47 | D2 |
| D2 | D2,D3 |



< Index>
**DEMODULATOR BO**
**COMPONENT SIDE**

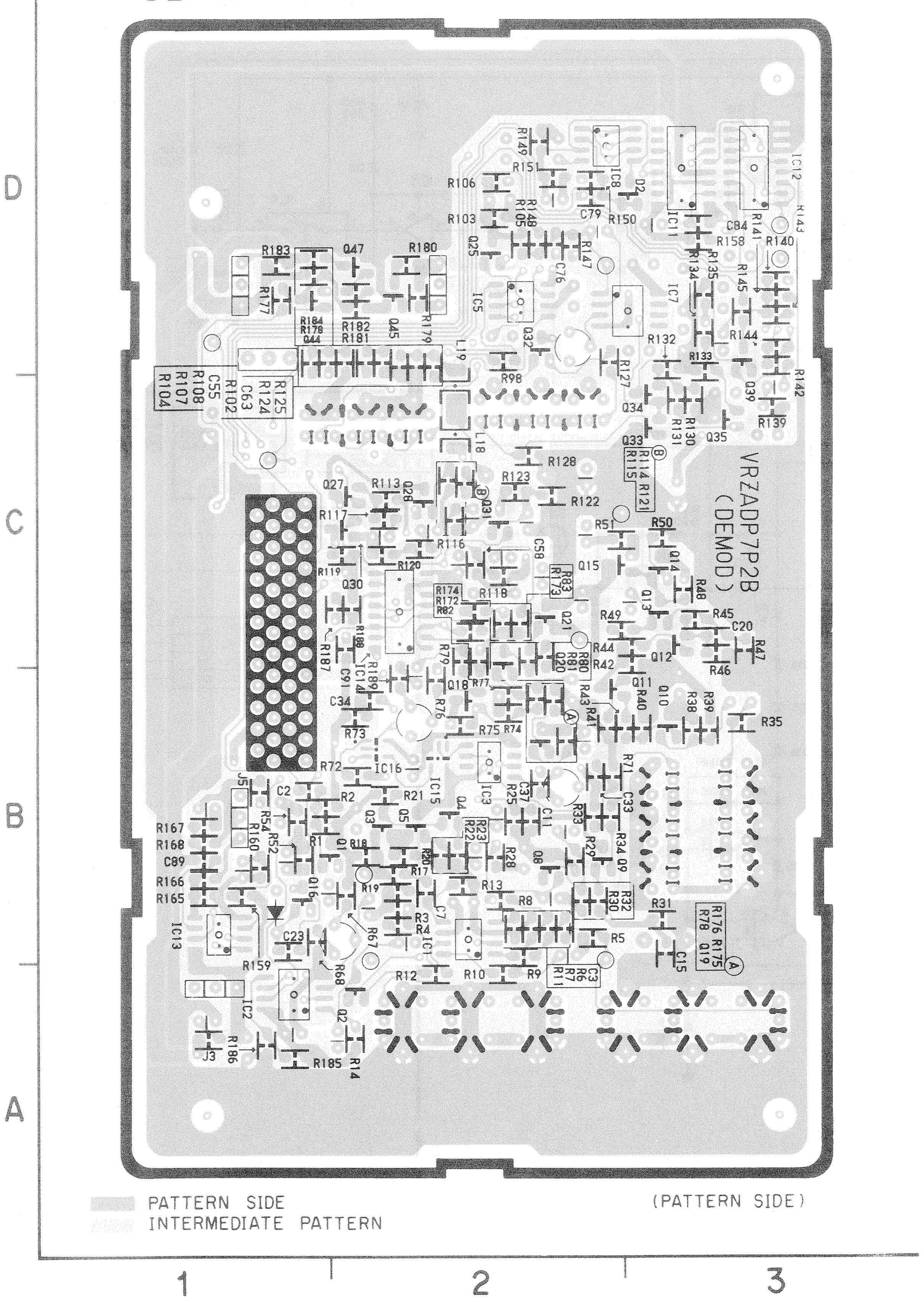
| | |
|---|---|
| IC4 | C2 |
| IC6 | D1 |
| IC9 | D1 |
| IC10 | D1 |
| Q6 | B2 |
| Q7 | B2 |
| Q17 | B2 |
| Q23 | D2 |
| Q24 | D2 |
| Q26 | C2 |
| Q29 | C2 |
| Q36 | D1 |
| Q37 | C1,D1 |
| Q38 | C1 |
| Q40 | B3 |
| Q41 | B3 |
| Q42 | B3 |
| Q43 | B3 |
| Q46 | D2 |
| Q48 | D3 |
| D1 | B3 |

# CONDUCTOR VIEW OF DEMODULATOR BOARD (WV-PS550)

Index>
EMODULATOR BOARD
ATTERN SIDE

| | |
|---|---|
| 1 | B2 |
| 2 | A1 |
| 3 | B2 |
| 5 | D2 |
| 7 | D2,D3 |
| 8 | D2 |
| 11 | D3 |
| 12 | D3 |
| 13 | B1 |
| 14 | C2 |
| 15 | B2 |
| 16 | B2 |
| | B1 |
| | A2 |
| | B2 |
| | B2 |
| | B2 |
| | B2 |
| | B2 |
| 0 | B3 |
| 1 | B2 |
| 2 | C3 |
| 3 | C3 |
| 4 | C3 |
| 5 | C2 |
| 6 | B2 |
| 8 | B2 |
| 9 | B2 |
| 20 | C2 |
| 21 | C2 |
| 25 | D2 |
| 27 | C1,C2 |
| 28 | C2 |
| 30 | C1,C2 |
| 31 | C2 |
| 32 | D2 |
| 33 | C3 |
| 34 | C3 |
| 35 | C3 |
| 39 | D3 |
| 44 | D1 |
| 45 | D2 |
| 47 | D2 |
| | D2,D3 |

DEMODULATOR BOARD



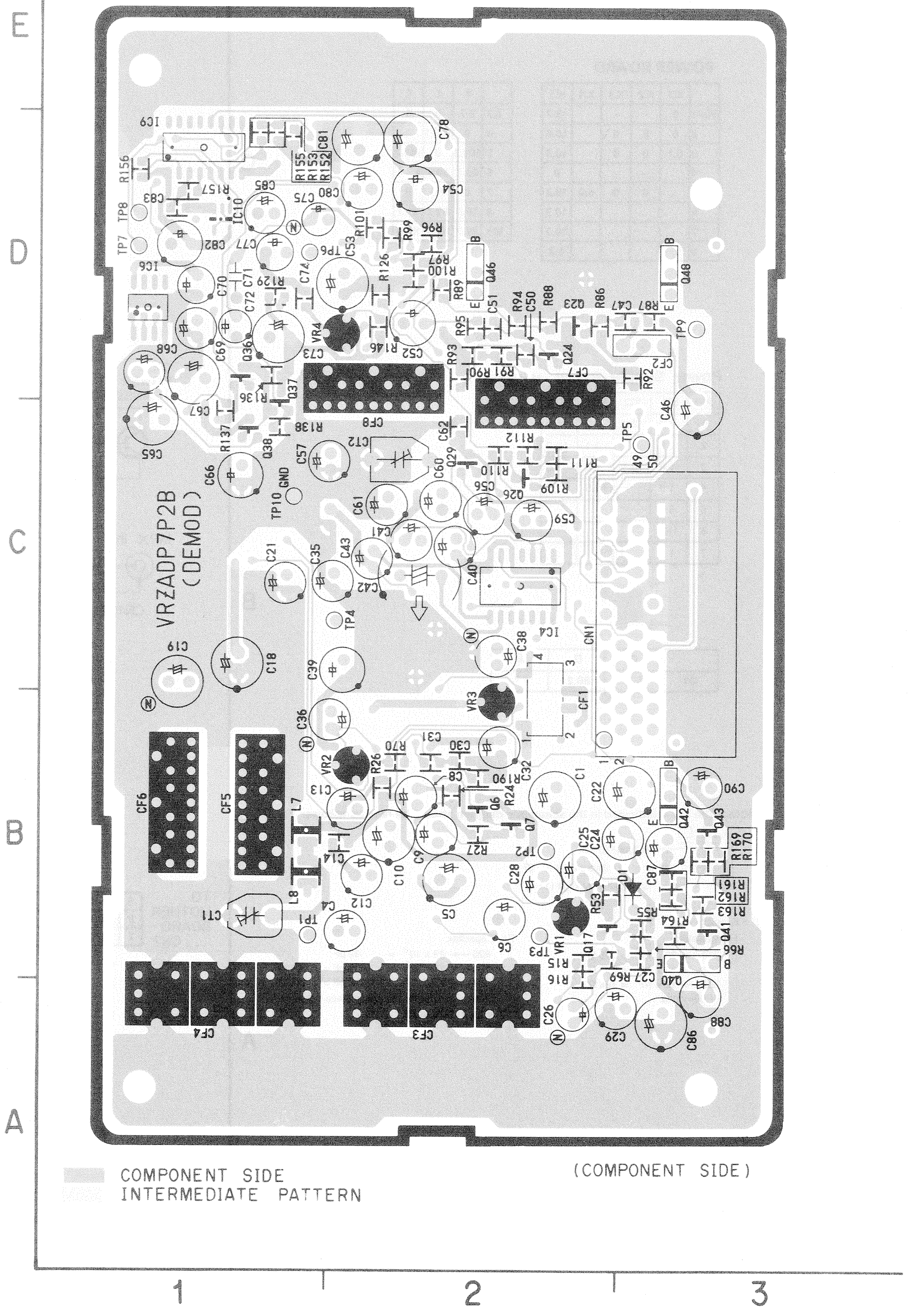
PATTERN SIDE
INTERMEDIATE PATTERN

(PATTERN SIDE)

< Index>
DEMODULATOR BOARD
COMPONENT SIDE

| | |
|---|---|
| IC4 | C2 |
| IC6 | D1 |
| IC9 | D1 |
| IC10 | D1 |
| Q6 | B2 |
| Q7 | B2 |
| Q17 | B2 |
| Q23 | D2 |
| Q24 | D2 |
| Q26 | C2 |
| Q29 | C2 |
| Q36 | D1 |
| Q37 | C1,D1 |
| Q38 | C1 |
| Q40 | B3 |
| Q41 | B3 |
| Q42 | B3 |
| Q43 | B3 |
| Q46 | D2 |
| Q48 | D3 |
| D1 | B3 |

DEMODULATOR BOARD



COMPONENT SIDE
INTERMEDIATE PATTERN

(COMPONENT SIDE)

# SCHEMATIC DIAGRAM OF POWER BOARD (WV-PS550)

**POWER BOARD**

| | IC1 | IC2 | IC3 | IC4 | IC5 |
|---|---|---|---|---|---|
| Pin 1 | 0 | - | - | | 13.7 |
| 2 | 0 | 0 | 0 | | 10.4 |
| 3 | 0.1 | 0 | 0 | | 10.3 |
| 4 | | - | - | | 0 |
| 5 | | 0 | 0 | 6.0 | 10.3 |
| 6 | | | | | 10.3 |
| 7 | | | | | 10.3 |
| 8 | | | | | 6.3 |

| | B | C | E |
|---|---|---|---|
| Q3 | 0.7 | 0 | 0 |
| 4 | 0 | 103.1 | 0 |
| 5 | 103.2 | 0 | 103.2 |
| 6 | 89.2 | 59.3 | 89.4 |
| 7 | 0 | 1.9 | 0 |
| 8 | 59.3 | 89.2 | 89.2 |
| 101 | 89.7 | 103.4 | 89.0 |

**Power Supply Board <Voltage>**

| PIN | IC1 | IC2 | PC1 | PC2 |
|---|---|---|---|---|
| 1 | 7.9 | 2.4 | 0.2 | 11.9 |
| 2 | 1.6 | 0 | -0.1 | 10.9 |
| 3 | 1.6 | 10.5 | 1.6 | 1.5 |
| 4 | 1.6 | | 15.5 | 7.7 |
| 5 | 6.2 | | | |
| 6 | 15.6 | | | |
| 7 | 1.6 | | | |

| | G | D | S |
|---|---|---|---|
| Q1 | 6.2 | 88.2 | 1.7 |

**Note: The value indicated in the schematic diagram should be read as follows:**

☐ ☐ ☐
- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Siginificant Digit (1 - 9)

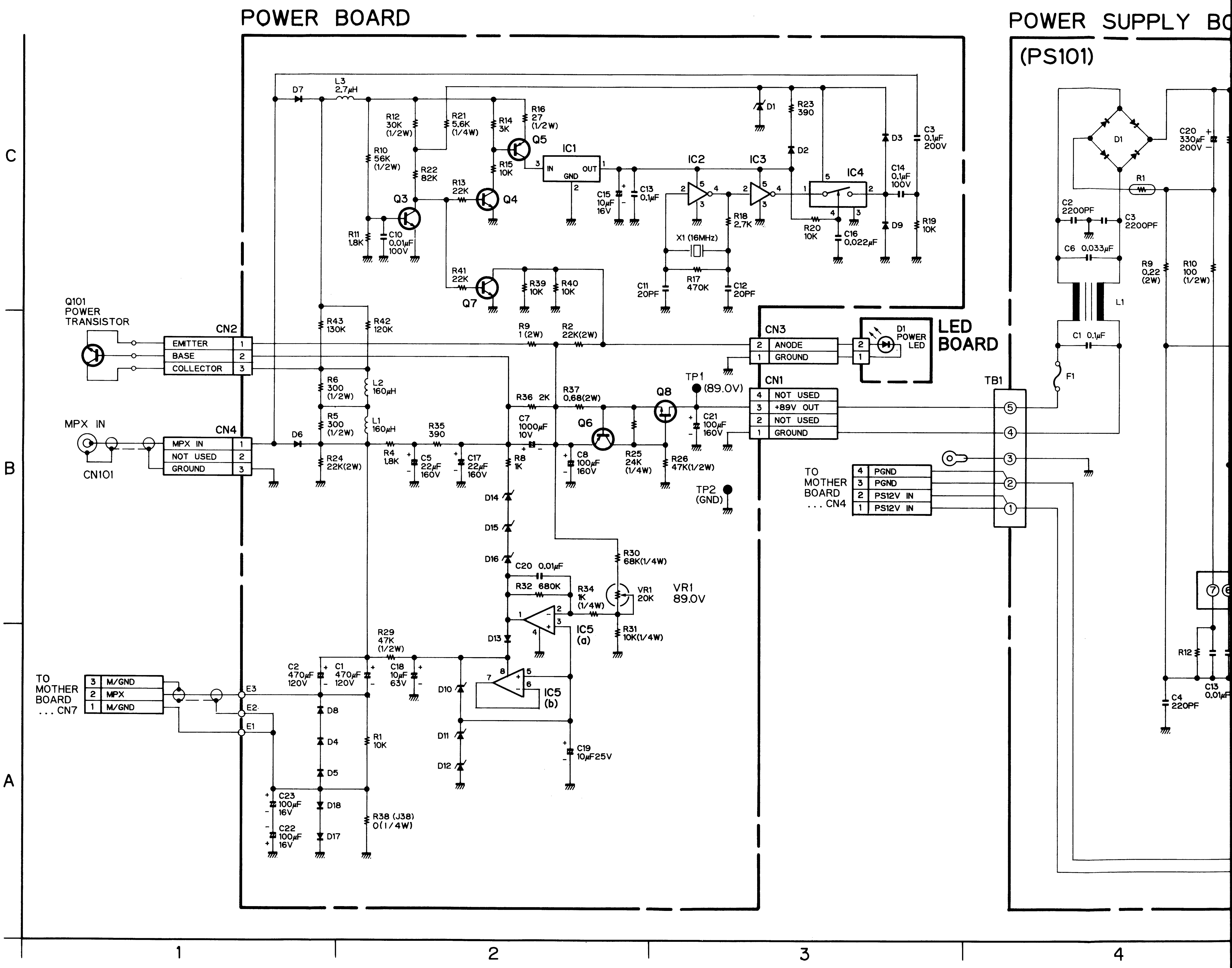
**<Example>**

For Resistor:

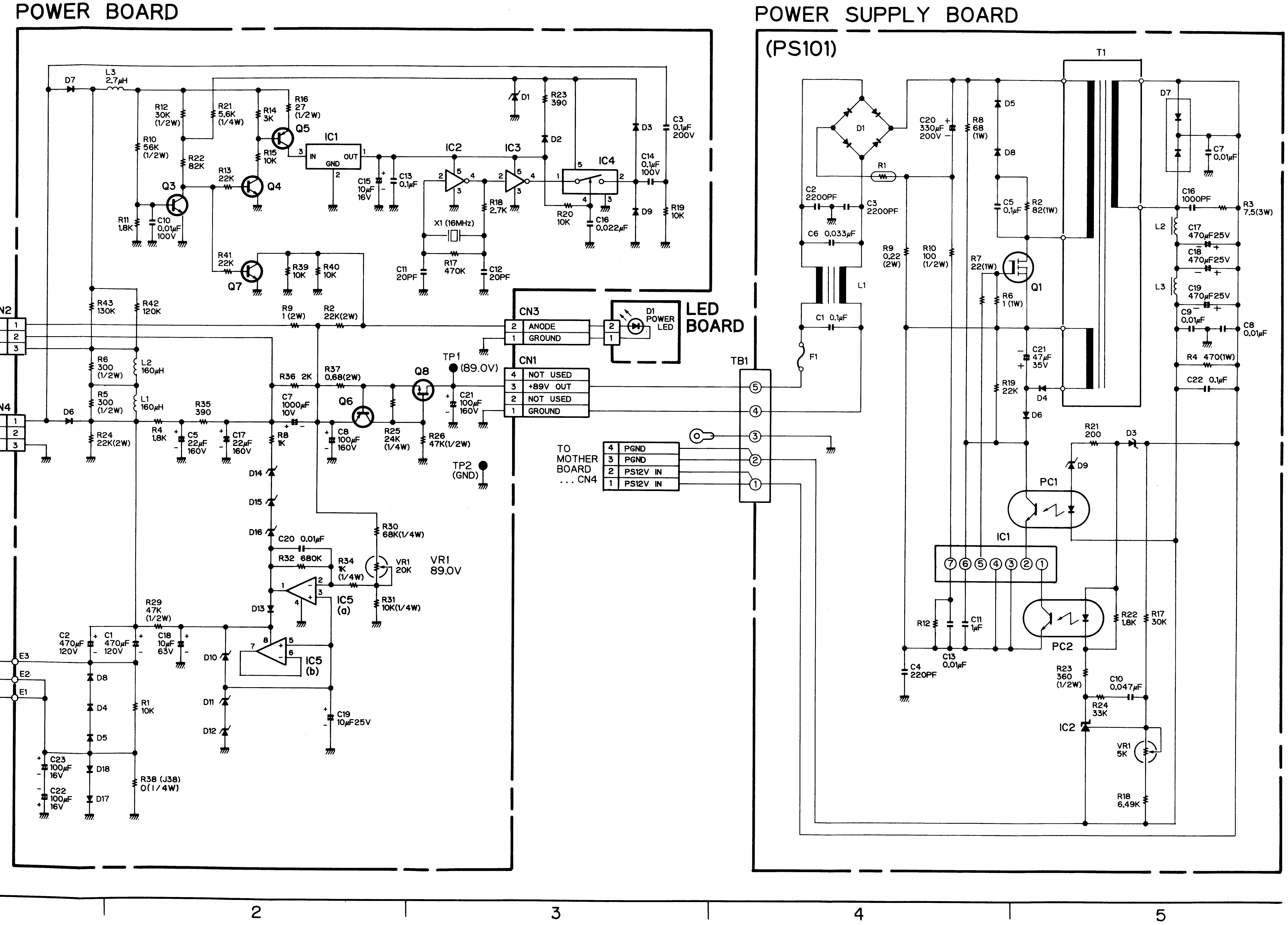
330 → 33 x $10^0$ = 33 Ω
561 → 56 x $10^1$ = 560 Ω
123 → 12 x $10^3$ = 12k Ω
0R00 = 0 Ω

For Capacitor:

820 → 82 x $10^0$ = 82 pF
102 → 10 x $10^2$ = 1000 pF = 0.001 µF
104 → 10 x $10^4$ = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.


POWER BOARD
POWER SUPPLY BO
(PS101)
C
B
A
1
2
3
4
D7
L3 2.7µH
R12 30K (1/2W)
R21 5.6K (1/4W)
R14 3K
R16 27 (1/2W)
Q5
R10 56K (1/2W)
R22 82K
R15 10K
IC1
IN OUT GND
R13 22K
Q3
Q4
R11 1.8K
C10 0.01µF 100V
C15 10µF 16V
C13 0.1µF
IC2
IC3
IC4
D1
R23 390
D2
D3
C3 0.1µF 200V
C14 0.1µF 100V
R18 2.7K
R20 10K
C16 0.022µF
D9
R19 10K
X1 (16MHz)
R17 470K
C11 20PF
C12 20PF
R41 22K
Q7
R39 10K
R40 10K
Q101 POWER TRANSISTOR
CN2
EMITTER
BASE
COLLECTOR
R43 130K
R42 120K
R9 1 (2W)
R2 22K(2W)
CN3
ANODE
GROUND
D1 POWER LED
LED BOARD
R6 300 (1/2W)
L2 160µH
R5 300 (1/2W)
L1 160µH
R36 2K
R37 0.68(2W)
TP1 (89.0V)
Q8
C21 100µF 160V
CN1
NOT USED
+89V OUT
NOT USED
GROUND
MPX IN
CN4
MPX IN
NOT USED
GROUND
CN101
D6
R35 390
R4 1.8K
C7 1000µF 10V
Q6
R24 22K(2W)
C5 22µF 160V
C17 22µF 160V
R8 1K
C8 100µF 160V
R25 24K (1/4W)
R26 47K(1/2W)
TP2 (GND)
TO MOTHER BOARD ... CN4
PGND
PGND
PS12V IN
PS12V IN
TB1
D14
D15
D16
C20 0.01µF
R32 680K
R34 1K (1/4W)
R30 68K(1/4W)
VR1 20K
VR1 89.0V
IC5 (a)
R31 10K(1/4W)
D13
R29 47K (1/2W)
TO MOTHER BOARD ... CN7
M/GND
MPX
M/GND
E3
E2
E1
C2 470µF 120V
C1 470µF 120V
C18 10µF 63V
D10
IC5 (b)
D8
D4
D5
R1 10K
D11
D12
C19 10µF25V
C23 100µF 16V
C22 100µF 16V
D18
D17
R38 (J38) 0(1/4W)
D1
C20 330µF 200V
R1
C2 2200PF
C3 2200PF
C6 0.033µF
R9 0.22 (2W)
R10 100 (1/2W)
L1
C1 0.1µF
F1
R12
C4 220PF
C13 0.01µF

# SCHEMATIC DIAGRAM OF POWER BOARD (WV-PS550)


POWER BOARD
POWER SUPPLY BOARD
(PS101)
LED BOARD
D7
L3 2.7μH
R12 30K (1/2W)
R21 5.6K (1/4W)
R14 3K
R16 27 (1/2W)
Q5
IC1
IN OUT GND
R10 56K (1/2W)
R22 82K
R15 10K
R13 22K
Q3
Q4
R11 1.8K
C10 0.01μF 100V
C15 10μF 16V
C13 0.1μF
IC2
IC3
IC4
D1
R23 390
D2
D3
D9
C3 0.1μF 200V
C14 0.1μF 100V
R19 10K
R20 10K
C16 0.022μF
R18 2.7K
X1 (16MHz)
R17 470K
C11 20PF
C12 20PF
R41 22K
Q7
R39 10K
R40 10K
R43 130K
R42 120K
R9 1 (2W)
R2 22K(2W)
CN3
ANODE
GROUND
D1 POWER LED
R6 300 (1/2W)
L2 160μH
R5 300 (1/2W)
L1 160μH
R36 2K
R37 0.68(2W)
Q8
TP1 (89.0V)
CN1
NOT USED
+89V OUT
NOT USED
GROUND
C7 1000μF 10V
Q6
C21 100μF 160V
D6
R24 22K(2W)
R4 1.8K
R35 390
C5 22μF 160V
C17 22μF 160V
R8 1K
C8 100μF 160V
R25 24K (1/4W)
R26 47K(1/2W)
TP2 (GND)
D14
D15
D16
C20 0.01μF
R32 680K
R34 1K (1/4W)
R30 68K(1/4W)
VR1 20K
VR1 89.0V
IC5 (a)
R31 10K(1/4W)
D13
R29 47K (1/2W)
C2 470μF 120V
C1 470μF 120V
C18 10μF 63V
IC5 (b)
D10
D11
D12
C19 10μF25V
E3
E2
E1
D8
D4
D5
R1 10K
C23 100μF 16V
C22 100μF 16V
D18
D17
R38 (J38) 0(1/4W)
TO MOTHER BOARD ... CN4
PGND
PGND
PS12V IN
PS12V IN
TB1
F1
C1 0.1μF
L1
C2 2200PF
C3 2200PF
C6 0.033μF
R1
C20 330μF 200V
R8 68 (1W)
D5
D8
C5 0.1μF
R2 82(1W)
R9 0.22 (2W)
R10 100 (1/2W)
R7 22(1W)
Q1
R6 1 (1W)
C21 47μF 35V
R19 22K
D4
D6
T1
C7 0.01μF
C16 1000PF
R3 7.5(3W)
L2
C17 470μF25V
C18 470μF25V
L3
C19 470μF25V
C9 0.01μF
C8 0.01μF
R4 470(1W)
C22 0.1μF
R21 200
D3
D9
PC1
IC1
R12
C11 1μF
C13 0.01μF
C4 220PF
PC2
R22 1.8K
R17 30K
R23 360 (1/2W)
C10 0.047μF
R24 33K
IC2
VR1 5K
R18 6.49K
2
3
4
5

**< Index>**
**POWER BOARD**

| | |
|---|---|
| IC1 | C2 |
| IC2 | C3 |
| IC3 | C3 |
| IC4 | C3 |
| IC5 | A2, B2 |
| Q3 | C2 |
| Q4 | C2 |
| Q5 | C2 |
| Q6 | B2 |
| Q7 | C2 |
| Q8 | B3 |
| Q101 | B1 |
| D1 | C3 |
| D2 | C3 |
| D3 | C3 |
| D4 | A1 |
| D5 | A1 |
| D6 | B1 |
| D7 | C1 |
| D8 | A8 |
| D9 | C3 |
| D10 | A2 |
| D11 | A12 |
| D12 | A2 |
| D13 | A2 |
| D14 | B2 |
| D15 | B2 |
| D16 | B2 |
| D17 | A1 |
| D18 | A1 |
| D101 | B3 |

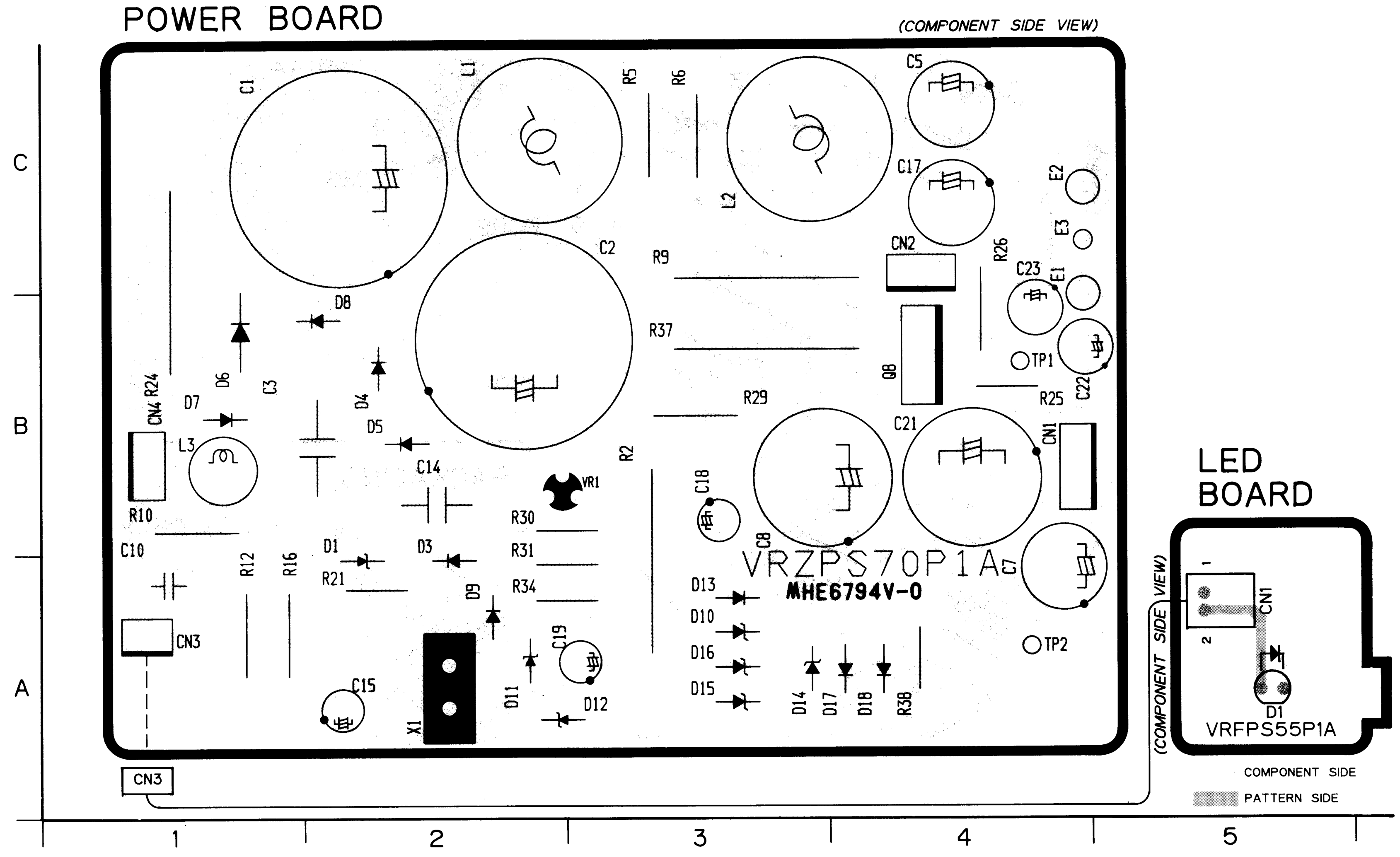
**< Index>**
**POWER SUPPLY BOARD**

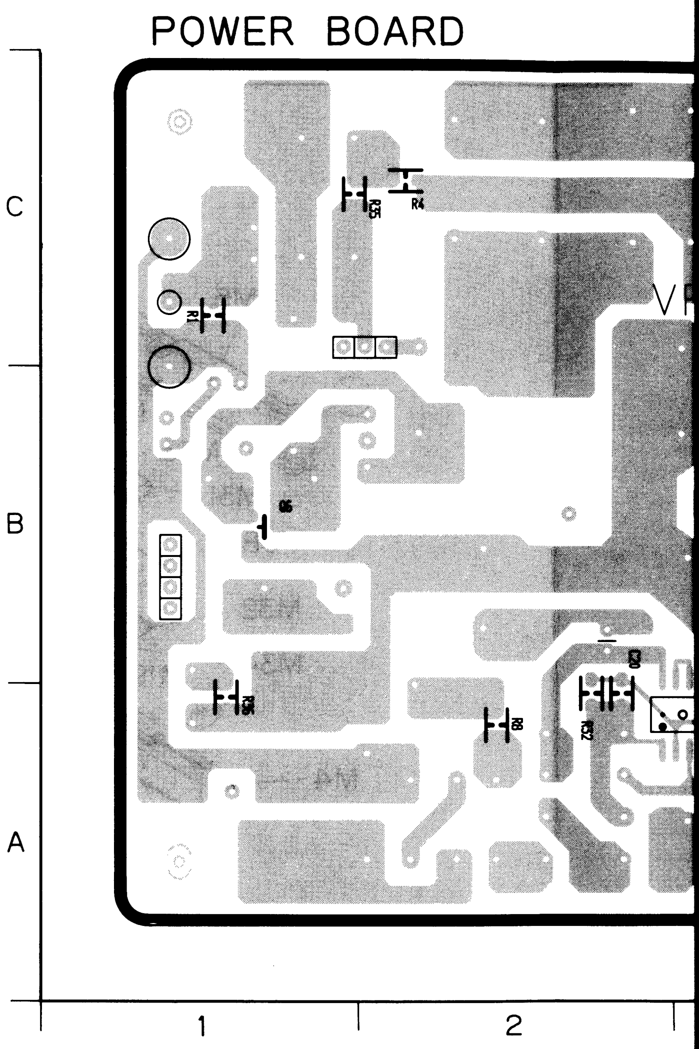
| | |
|---|---|
| IC1 | B4, B5 |
| IC2 | A5 |
| Q1 | C5 |
| D1 | C4 |
| D3 | B5 |
| D4 | B5 |
| D5 | C5 |
| D6 | B5 |
| D7 | C5 |
| D8 | C5 |
| D9 | B5 |
| PC1 | B5 |
| PC2 | A5 |

**< Index>**
**LED BOARD**

| | |
|---|---|
| D1 | B3 |

# CONDUCTOR VIEW OF


POWER BOARD
(COMPONENT SIDE VIEW)
C
B
A
1
2
3
4
5
C1
L1
R5
R6
C5
C17
E2
E3
E1
L2
C2
R9
R37
R29
CN2
R26
C23
TP1
C22
R25
Q8
C21
CN1
C18
C8
C7
TP2
D8
D6
C3
D4
D5
D7
CN4 R24
L3
R10
C10
R12
R16
D1
R21
D3
C14
VR1
R30
R31
R34
R2
D9
C19
D11
D12
X1
C15
CN3
D13
D10
D16
D15
D14
D17
D18
R38
VRZPS70P1A
MHE6794V-0
LED BOARD
(COMPONENT SIDE VIEW)
1
2
CN1
D1
VRFPS55P1A
COMPONENT SIDE
PATTERN SIDE


POWER BOARD
C
B
A
1
2
R5
R4
R1
Q6
Q3
R8

**< Index >**
**POWER BOARD**
**COMPONENT SIDE**

| | |
|---|---|
| Q8 | B4 |
| D1 | A2 |
| D3 | A2 |
| D4 | B2 |
| D5 | B2 |
| D6 | B1 |
| D7 | B1 |
| D8 | B2 |
| D9 | A2 |
| D10 | A3 |
| D11 | A2 |
| D12 | A2, A3 |
| D13 | A3 |
| D14 | A3 |
| D15 | A3 |
| D16 | A3 |
| D17 | A4 |
| D18 | A4 |

**< Index>**
**LED BOARD**

| | |
|---|---|
| D1 | A5 |

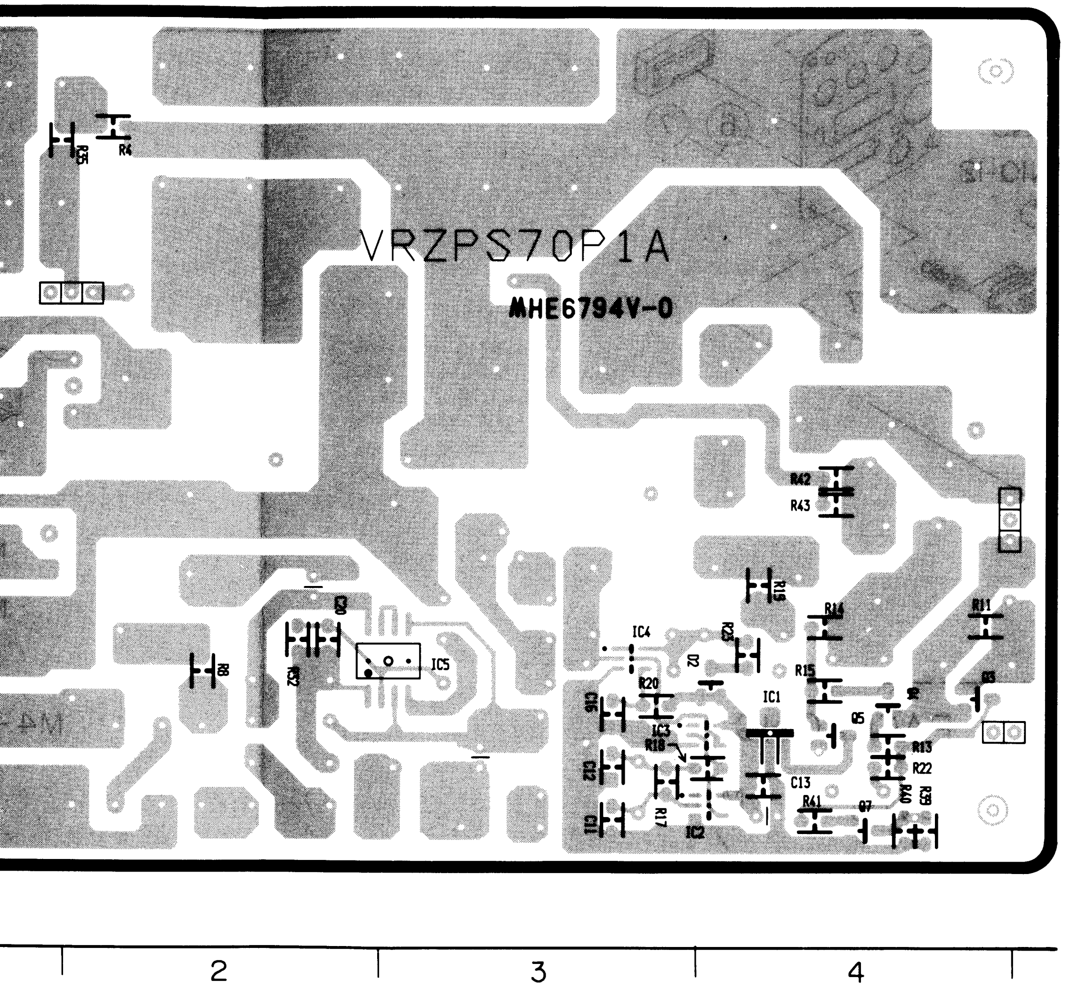
**< Index >**
**POWER BOARD**
**PATTERN SIDE**

| | |
|---|---|
| IC1 | A4 |
| IC2 | A4 |
| IC3 | A4 |
| IC4 | A3 |
| IC5 | A2, A3 |
| Q3 | A4 |
| Q4 | A4 |
| Q5 | A4 |
| Q7 | A4 |
| D2 | A4 |

# TOR VIEW OF POWER BOARD (WV-PS550)

BOARD

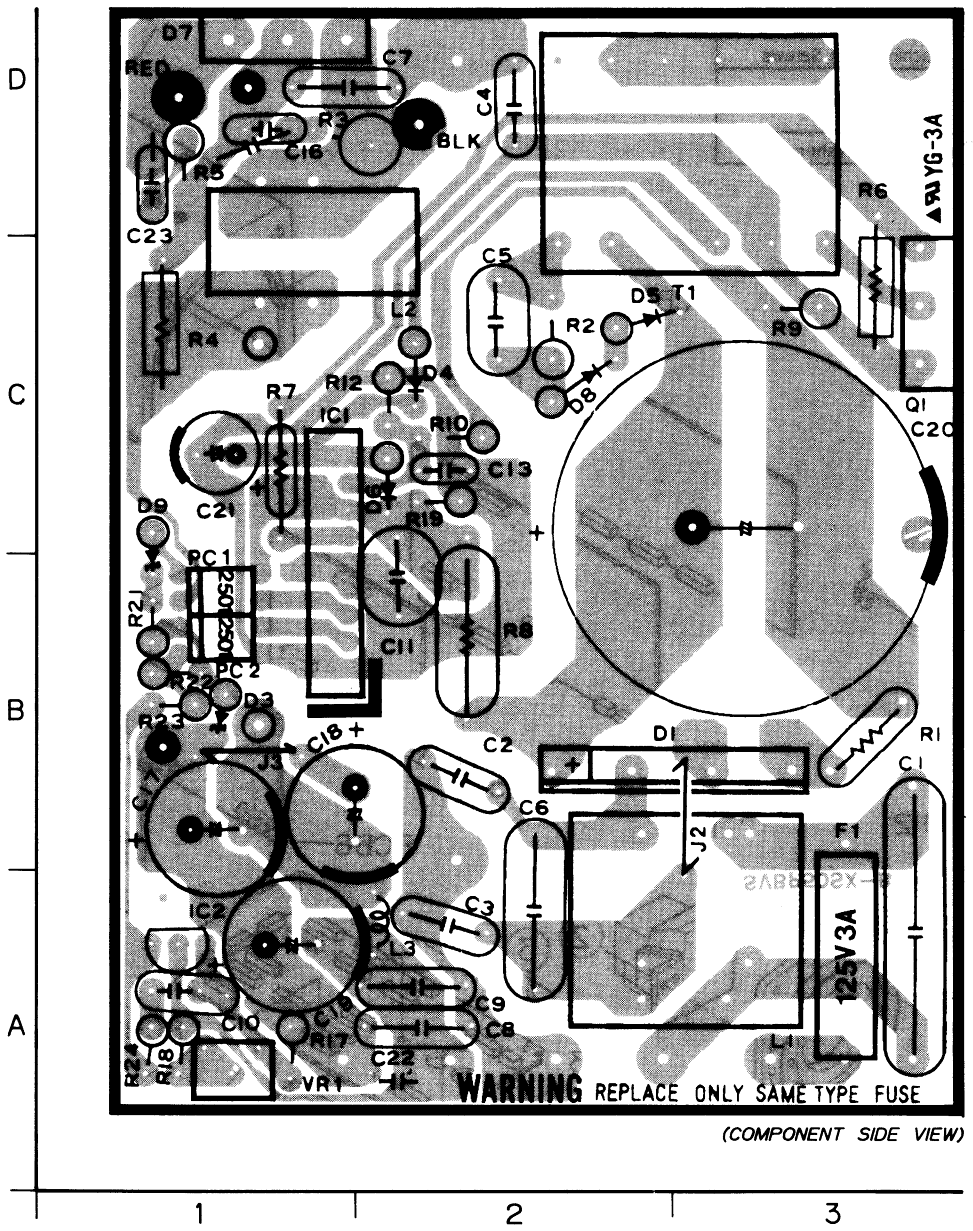
(PATTERN SIDE VIEW)


VRZPS70P1A
MHE6794V-0
R35
R4
R42
R43
R15
R14
R11
IC4
IC1
IC5
IC3
IC2
R20
R18
R17
R13
R22
R41
C13
C12
Q5
Q7
2
3
4

ARD
DE

, A3

## POWER SUPPLY BOARD


D
C
B
A
1
2
3
D7
RED
C7
R3
C16
BLK
C4
R5
C23
R6
YG-3A
C5
R2
D5
T1
R9
R4
L2
R12
D4
R7
IC1
R10
C13
Q1
C20
C21
D6
R19
D9
PC1
R21
PC2
R8
C11
R22
D3
R23
C18
J3
C17
C2
D1
R1
C1
C6
J2
F1
IC2
L3
C3
125V3A
C9
C8
C10
R17
C22
L1
R24
R18
VR1
WARNING REPLACE ONLY SAME TYPE FUSE

(COMPONENT SIDE VIEW)

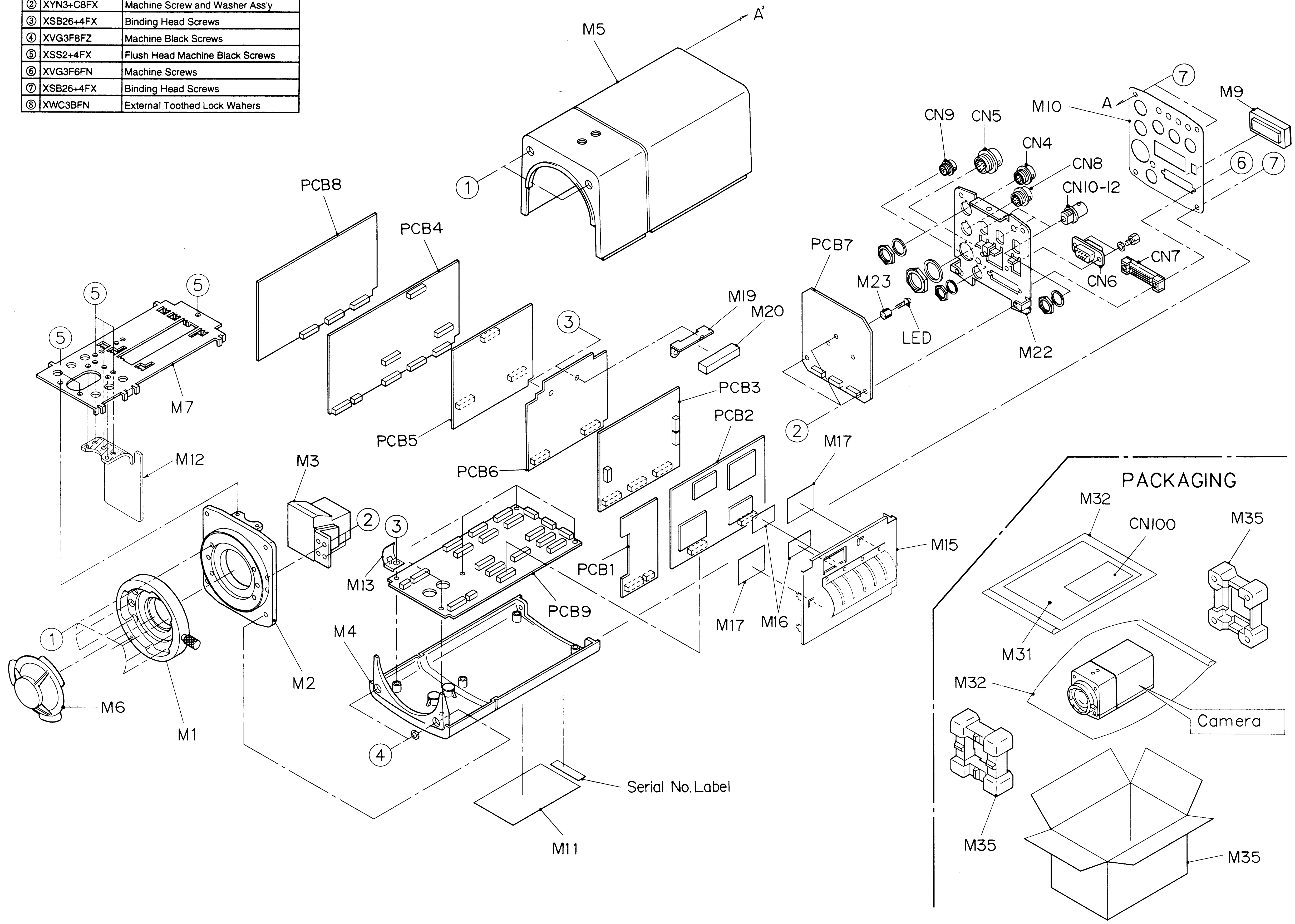
< Index>
**POWER SUPPLY BOARD**
**COMPONENT SIDE**

| | |
|---|---|
| IC1 | B1, B2, C1, C2 |
| Q1 | C3 |
| D1 | B2, B3 |
| D3 | B1 |
| D4 | C2 |
| D5 | C2 |
| D6 | C2 |
| D7 | D1 |
| D8 | C2 |
| D9 | C1 |
| PC1 | B1 |
| PC2 | B1 |

# EXPLODED VIEW (WV-E550E)

○ Numbers shows screws, washers, nuts and etc.

| | Screws | Description |
|---|---|---|
| ① | XSN3+6FN | Binding Head Screws |
| ② | XYN3+C8FX | Machine Screw and Washer Ass'y |
| ③ | XSB26+4FX | Binding Head Screws |
| ④ | XVG3F8FZ | Machine Black Screws |
| ⑤ | XSS2+4FX | Flush Head Machine Black Screws |
| ⑥ | XVG3F6FN | Machine Screws |
| ⑦ | XSB26+4FX | Binding Head Screws |
| ⑧ | XWC3BFN | External Toothed Lock Wahers |


A'
M5
①
PCB8
PCB4
CN9
CN5
M10
A
⑦
M9
CN4
CN8
CN10-12
⑥
⑦
PCB7
M23
CN6
CN7
LED
M22
⑤
⑤
⑤
M7
③
M19
M20
PCB3
PCB2
PCB5
PCB6
②
M17
M12
M3
②
③
M13
PCB1
M15
PCB9
M4
M17
M16
①
M2
M6
M1
④
Serial No.Label
M11
PACKAGING
M32
CN100
M35
M31
M32
Camera
M35
M35

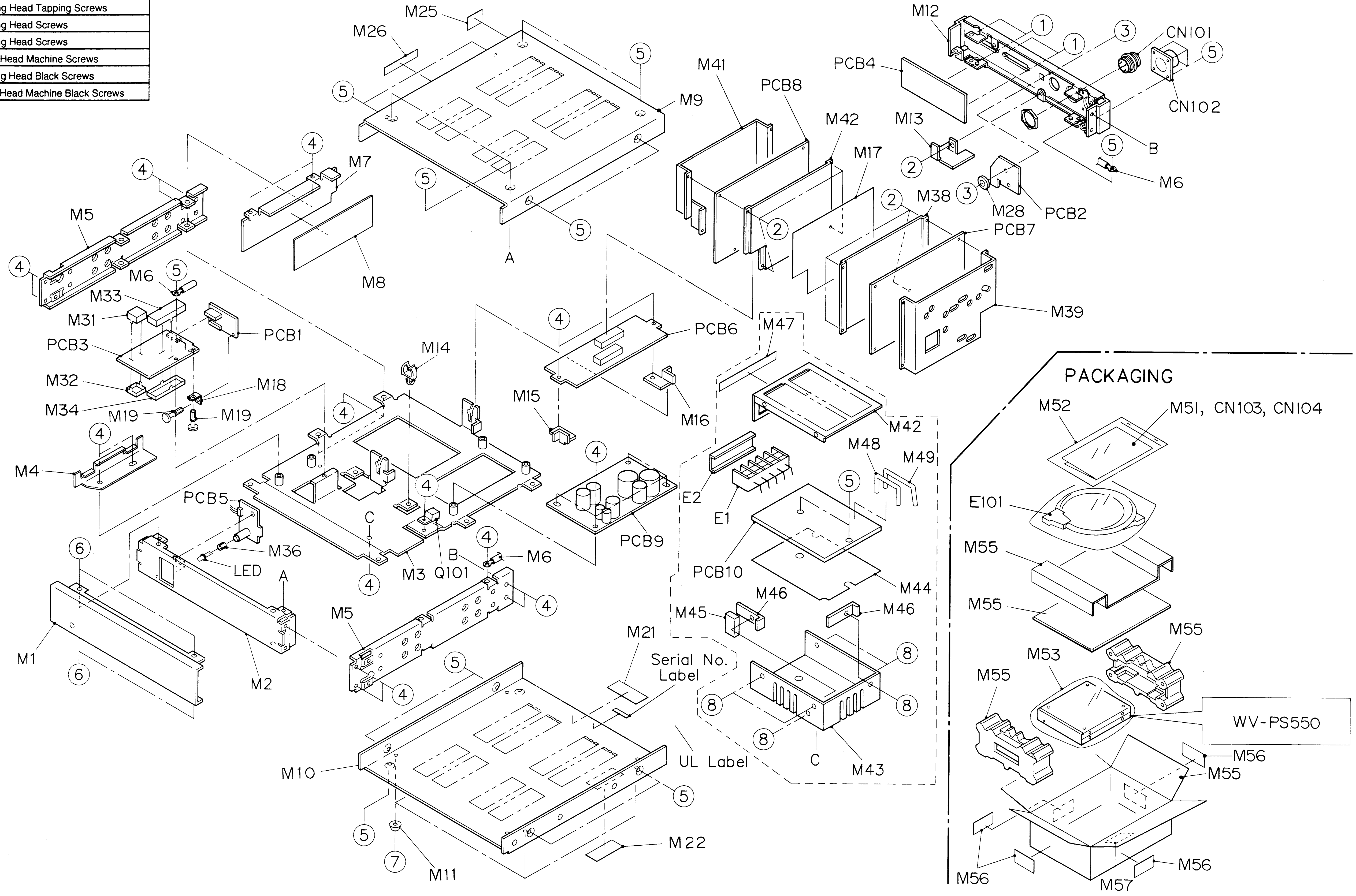
○ Numbers shows screws, washers,

| | Screws | D |
|---|---|---|
| ① | XSB25+6FN | Binding Head S |
| ② | XSB26+4FX | Binding Head S |
| ③ | XTB3+6BFN | Binding Head T |
| ④ | XSB3+6FX | Binding Head S |
| ⑤ | XSB3+6FN | Binding Head S |
| ⑥ | XSS26+6FN | Flush Head Ma |
| ⑦ | XSB3+12FXK | Binding Head B |
| ⑧ | XSS3+6FXK | Flush Head Ma |

# EXPLODED VIEW (WV-PS550)

○ Numbers shows screws, washers, nuts and etc.

| | Screws | Description |
|---|---|---|
| ① | XSB25+6FN | Binding Head Screws |
| ② | XSB26+4FX | Binding Head Screws |
| ③ | XTB3+6BFN | Binding Head Tapping Screws |
| ④ | XSB3+6FX | Binding Head Screws |
| ⑤ | XSB3+6FN | Binding Head Screws |
| ⑥ | XSS26+6FN | Flush Head Machine Screws |
| ⑦ | XSB3+12FXK | Binding Head Black Screws |
| ⑧ | XSS3+6FXK | Flush Head Machine Black Screws |


M25
M26
⑤
M9
⑤
④
M7
⑤
⑤
A
M8
④
M5
④
M6
⑤
M33
M31
PCB1
PCB3
M32
M18
M34
M19
M19
④
M4
M12
①
①
③
CN101
⑤
CN102
PCB4
M41
PCB8
M42
M13
M17
②
⑤
B
M6
②
M38
③
M28
PCB2
PCB7
②
M39
④
PCB6
M47
M14
④
M15
M16
M42
④
M48
M49
PCB5
④
⑤
E2
E1
M36
LED
C
B
M6
PCB9
④
PCB10
⑥
A
④
M3
Q101
④
M44
M46
M45
M46
M5
M1
M2
⑥
④
M21
Serial No. Label
⑧
⑧
⑧
⑧
⑤
M10
UL Label
C
M43
⑤
⑤
⑦
M11
M22
PACKAGING
M52
M51, CN103, CN104
E101
M55
M55
M55
M53
M55
WV-PS550
M56
M55
M56
M56
M57

# REPLACEMENT PARTS LIST

Important Notice

1. Components identified by " ⚠ " mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited.

## COLOUR VIDEO CAMERA WV-E550E

### MISCELLANEOUS

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| M1 | YWV0EA0284AN | Bayonet Mont Assy |
| M2 | YWV2KA0862B2 | Optical Chassis |
| M3 | YWV0EA0307AN | Optical Head Assy |
| M4 | YWV5KA1330B1 | Bottom Case |
| M5 | YWV5KA1329A1 | Upper Case |
| M6 | CAP410A | Body Cap |
| M7 | YWV2CA0385B2 | Hold Plate |
| M9 | YWPCSE28CU | Connector Cap |
| M10 | YWV6GA0259A3 | Rear Panel |
| M11 ⚠ | YWV7QA3240A4 | Main Label |
| M12 | YWV7DA0387A3 | Heat sink |
| M13 | YWV4JA0483A4 | Spring Plate |
| M20 | YWV2FA0657A4 | Rubber Cushion for Heat Sink |

## DRIVE BOARD

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| PCB1 (RTL) | YWVKBE550E1A | Printed Circuit Board Assy |
| IC3 | MN5197 | IC |
| IC7 | YWTC7W04FUL | IC |
| IC8 | YWTC7S08F | IC |
| IC9 | YWCXD1265R | IC |
| IC11 | TC74HC4050AF | IC |
| IC12 | UPD74HC4049G | IC |
| IC15 | TC74HC4050AF | IC |
| IC16 | YWTC7S86F | IC |
| IC17 | YWTC7S32F | IC |
| IC18 | YWTC7W74F | IC |
| IC19 | YWTC7WU04F | IC |
| Q1 | 2SK662-PQR | FET |
| Q2-4 | 2SB1218A-QR | Transistor |
| Q5 | 2SC4176 | Transistor |
| Q6 | 2SA1610 | Transistor |
| Q7-9 | 2SD1819-QRS | Transistor |
| D1,2 | MA372 | Diode |
| D3 | MA121 | Diode |
| D4,5 | MA143 | Diode |
| D6 | MA121 | Diode |
| D7,8 | MA141K | Diode |
| R1 | ERJ3GEY0R00 | Carbon 0 ohms 1/16W |
| R2 | ERJ3GEYJ102 | Carbon 1K ohms 1/16W |
| R3 | ERJ3GEYJ752 | Carbon 7.5Kohms 1/16W |
| R4 | ERJ3GEYJ302 | Carbon 3K ohms 1/16W |
| R5,6 | ERJ3GEYJ103 | Carbon 10K ohms 1/16W |
| R8 | ERJ3GEYJ101 | Carbon 100 ohms 1/16W |
| R26,52 | ERJ3GEY0R00 | Carbon 0 ohms 1/16W |
| R65 | ERJ3GEYJ100 | Carbon 10 ohms 1/16W |
| R69 | ERJ3GEY0R00 | Carbon 0 ohms 1/16W |
| R71 | ERJ3GEYJ105 | Carbon 1M ohms 1/16W |
| R75 | ERJ3GEY0R00 | Carbon 0 ohms 1/16W |
| R81-83 | ERJ3GEYJ470 | Carbon 47 ohms 1/16W |
| R84 | ERJ3GEY0R00 | Carbon 0 ohms 1/16W |
| R87-89 | ERJ3GEYJ470 | Carbon 47 ohms 1/16W |
| R92-94 | ERJ3GEYJ470 | Carbon 47 ohms 1/16W |
| R95-97 | ERJ3GEYJ103 | Carbon 10K ohms 1/16W |
| R98-100 | ERJ3GEYJ104 | Carbon 100K ohms 1/16W |
| R101 | ERJ3GEYJ100 | Carbon 10 ohms 1/16W |
| R105 | ERJ3GEY0R00 | Carbon 0 ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R106 | YWR0816R393D | Metal | 39K ohms 1/16W |
| R107-109 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R133,143 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R150,151 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R152,153 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R154 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R155 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R156 | YWR0816P271D | Metal | 270 ohms 1/16W |
| R157 | YWR0816P331D | Metal | 330 ohms 1/16W |
| R158 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R159 | YWR0816P201D | Metal | 200 ohms 1/16W |
| R160 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R162 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R163 | ERJ3GEYJ151 | Carbon | 150 ohms 1/16W |
| R164 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R165 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R166 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| VR1-3 | EVM7JGA30B15 | Variable Resistor | 100K ohms |
| VR4-6 | EVM7JSW30B25 | Variable Resistor | 200K ohms |
| C1 | SK21C225KRA | Electrolytic | 2.2 μF 16V |
| C2 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C3 | YW5CH221J5VB | Ceramic | 220 pF |
| C4 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C5 | YW5CH221J5VB | Ceramic | 220 pF |
| C8,10 | SK21A476KRD0 | Electrolytic | 47 μF 10V |
| C13-15 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C16-18 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C19-21 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C22 | SK21A476KRD0 | Electrolytic | 47 μF 10V |
| C23-25 | ECEV1EV100 | Electrolytic | 10 μF 25V |
| C44 | YW5X102K5VB | Ceramic | 1000 pF |
| C45 | SK21A476KRD0 | Electrolytic | 47 μF 10V |
| C46 | YW5CH100J5VB | Ceramic | 10 pF |
| C47 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C48 | YW5CH330J5VB | Ceramic | 33 pF |
| C49 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C50,52 | YW5CH220J5VB | Ceramic | 22 pF |
| C54,55 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C56,57 | YW5CH220J5VB | Ceramic | 22 pF |
| C60 | YW5X102K5VB | Ceramic | 1000 pF |
| L1 | EIC4EJ010E | Coil | 1 μH |
| L2 | YWNL32150J | Coil | 15 μH |
| CN1 | YW522052690 | 26-pin Connector | |
| CN2 | YW51756394 | 24-pin Connector | |
| CN3 | YW41756392 | 12-pin Connector | |
| TP1-8 | YWRCT2125TPV | Test Point | |

## DIGITAL PROCESS BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB2 (RTL) | YWVKCE550E1A | Printed Circuit Board Assy | |
| IC1 | YWVC5776 | LSI | |
| IC2 | YWVC5727 | LSI | |
| IC3 | YWVC5777A | LSI | |
| IC4 | YWVC5778 | LSI | |
| IC5 | NJM2904M | IC | |
| IC6-8 | YWCXD1175AM | IC | |
| IC9 | YWTC74AC04AF | IC | |
| IC10 | YWHD74AC164F | IC | |
| IC11 | YWTC74AC00F | IC | |
| IC12 | YWTC74AC08F | IC | |
| IC14 | YWTC7S32F | IC | |
| IC15 | YWTC74AC74F | IC | |
| IC16 | YWTC74AC08F | IC | |
| IC17-20 | YWMN6557AS | IC | |
| IC21 | YWTC4S66FR | IC | |
| IC22 | YWTC7S08F | IC | |
| Q1 | 2SB956-RS | Transistor | |
| Q2 | 2SD1819-QRS | Transistor | |
| Q3 | 2SB1073-QR | Transistor | |
| Q4 | 2SD1819-QRS | Transistor | |
| R1,2 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R3 | YWR0816P163D | Metal | 16K ohms 1/16W |
| R4 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R5 | ERJ3GEYJ330 | Carbon | 33 ohms 1/16W |
| R6 | YWR0816P153D | Metal | 15K ohms 1/16W |
| R7,8 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R9 | YWR0816P183D | Metal | 18K ohms 1/16W |
| R10 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R11 | YWR0816P163D | Metal | 16K ohms 1/16W |
| R12 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R13-17 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R18 | YWR0816P821D | Metal | 820 ohms 1/16W |
| R19,22 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R27 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R28 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R29 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R30 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R31 | ERJ3GEYJ471 | Carbon | 470 ohms 1/16W |
| R56 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R57 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R58,59 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R61,67 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R69,70 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R73-75 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R80 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R83 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R84 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R91-93 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R98 | ERJ3GEYJ680 | Carbon | 68 ohms 1/16W |
| R201 | YWR0816Q750D | Metal | 75 ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R204 | YWR0816P681D | Metal | 680 ohms 1/16W |
| R226 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R301 | YWR0816Q750D | Metal | 75 ohms 1/16W |
| R304 | YWR0816P681D | Metal | 680 ohms 1/16W |
| R326 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R401 | YWR0816Q750D | Metal | 75 ohms 1/16W |
| R402 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R403 | YWR0816P302D | Metal | 3K ohms 1/16W |
| R404 | YWR0816P681D | Metal | 680 ohms 1/16W |
| R405 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R406 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| R426 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R501 | YWR0816Q750D | Metal | 75 ohms 1/16W |
| R504 | YWR0816P681D | Metal | 680 ohms 1/16W |
| R526 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| C1 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C2 | ECEV0JV220 | Electrolytic | 22 µF 6.3V |
| C3 | YW5X103K2VB | Ceramic | 0.01 µF |
| C4 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C5 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C6 | ECEV0JV220 | Electrolytic | 22 µF 6.3V |
| C7 | YW5X103K2VB | Ceramic | 0.01 µF |
| C8,9 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C10,11 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C12 | YW5CH681J2VB | Ceramic | 680 pF |
| C13 | YW5CH220J5VB | Ceramic | 22 pF |
| C15 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C16 | YW5CH100D5VB | Ceramic | 10 pF |
| C17,19 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C21-32 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C34,35 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C36 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C37 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C38 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C39-45 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C46 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C47-50 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C51 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C52 | YW5F224Z1VB | Ceramic | 0.22 µF |
| C61-63 | YW5CH330J5VB | Ceramic | 33 pF |
| C201 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C202 | SK21A476KRD0 | Electrolytic | 47 µF 10V |
| C203 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C204,205 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C206 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C207 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C208 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C301 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C302 | SK21A476KRD0 | Electrolytic | 47 µF 10V |
| C303 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C304,305 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C307,401 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C402 | SK21A476KRD0 | Electrolytic | 47 µF 10V |
| C403 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C404,405 | YW5F104Z2VB | Ceramic | 0.1 µF |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C407 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C409 | SK31C335KRA | Electrolytic | 3.3 µF 16V |
| C501 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C502 | SK21A476KRD0 | Electrolytic | 47 µF 10V |
| C503 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C504,505 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C506 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C507 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C508 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C509 | YW5CH330J5VB | Ceramic | 33 pF |
| CT1-3 | TZBX4R500BAT | Trimmer Capacitor | |
| L6,7 | YWBLM21B03PB | Coil | |
| CF201,301 | YWHF50ACB32T | Filter | |
| CF401,501 | YWHF50ACB32T | Filter | |
| CN1,2 | YW51756394 | Connector | |
| CN3-5 | YW41756386 | Connector | |
| TP1-10 | YWRCT2125TPV | Test -Pin | |
| M15 | YWV5KA1337A2 | Case for Heat Sink | |
| M16 | YWV2FA0599A4 | Cushion A for Heat Sink | |
| M17 | YWV2FA0600A4 | Cushion B for Heat Sink | |

## SYSTEM BOARD

| | | |
|---|---|---|
| PCB3 (RTL) | YWVKCE550P2A | Printed Circuit Board Assy |
| IC1 | YWL7A0425 | LSI |
| IC2 | YWMN18885 | LSI |
| IC3 | YWM27C512F52 | IC |
| IC4 | 43256AGU10L | IC |
| IC5,6 | YWUPD4081BG | IC |
| IC7 | YWUPD4011BG | IC |
| IC8 | YWUPD4081BG | IC |
| IC9 | NJM2904M | IC |
| IC10 | YWM51957BFP | IC |
| IC12 | YWM62352GP | IC |
| IC13 | YWUPC4064G2 | IC |
| IC14 | YWUPD4081BG | IC |
| IC15 | YWM51957BFP | IC |
| IC16 | UPD74HC4066G | IC |
| IC17 | YWUPD6450601 | IC |
| IC18 | YWRTC450315B | IC |
| IC19 | NJM2902M | IC |
| Q1,2 | 2SD1819-QRS | Transistor |
| Q9 | 2SB1219-QRS | Transistor |
| Q10-12 | 2SD1819-QRS | Transistor |
| Q13 | 2SB1218-QRS | Transistor |
| Q14 | 2SB1219-QRS | Transistor |
| Q15 | 2SD1819-QRS | Transistor |
| Q16 | 2SB766A-QR | Transistor |
| Q17 | 2SD1819-QRS | Transistor |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| Q18 | 2SD874A-RS | Transistor | |
| Q19 | 2SB1218-QRS | Transistor | |
| Q20 | 2SB766A-QR | Transistor | |
| Q21 | 2SD1819-QRS | Transistor | |
| D1,3 | MA141K | Diode | |
| D4-6 | MA141K | Diode | |
| D7 | MA143 | Diode | |
| D8-10 | MA141K | Diode | |
| R5,6 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R7,8 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R9,10 | ERJ3GEYJ683 | Carbon | 68K ohms 1/16W |
| R11,12 | ERJ3GEYJ224 | Carbon | 220K ohms 1/16W |
| R13 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| R14,15 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R16 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R17 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R18 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R19 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R20-46 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R47-63 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R64-66 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R67 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R68 | YWR0816P303D | Metal | 30K ohms 1/16W |
| R69 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R70-85 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R86 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R87 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R88-91 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R92,94 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R95-98 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R99 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R100-121 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R122-129 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R130-134 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R135 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R137 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R138 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R140 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R141 | YWR0816P472D | Metal | 4.7K ohms 1/16W |
| R142 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R151-154 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R155 | YWR0816R433D | Metal | 43K ohms 1/16W |
| R156 | YWR0816P272D | Metal | 2.7K ohms 1/16W |
| R157 | YWR0816R433D | Metal | 43K ohms 1/16W |
| R158 | YWR0816P272D | Metal | 2.7K ohms 1/16W |
| R159 | YWR0816R433D | Metal | 43K ohms 1/16W |
| R160 | YWR0816P272D | Metal | 2.7K ohms 1/16W |
| R161,162 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R164,165 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R167 | YWR0816P163D | Metal | 16K ohms 1/16W |
| R168 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R169 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R170 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R171 | YWR0816P163D | Metal | 16K ohms 1/16W |
| R172 | YWR0816P202D | Metal | 2K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R173 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R174 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R175 | YWR0816P472D | Metal | 4.7K ohms 1/16W |
| R176,177 | YWR0816P332D | Metal | 3.3K ohms 1/16W |
| R178 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R179 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R180 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R181 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R182 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R183 | YWR0816P682D | Metal | 6.8K ohms 1/16W |
| R184 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R185 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R186 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R187 | ERJ3GEYJ224 | Carbon | 220K ohms 1/16W |
| R188-191 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R192 | ERJ3GEYJ122 | Carbon | 1.2K ohms 1/16W |
| R193 | ERJ3GEYJ273 | Carbon | 27K ohms 1/16W |
| R194 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R195 | ERJ3GEYJ912 | Carbon | 9.1K ohms 1/16W |
| R196 | ERJ3GEYJ183 | Carbon | 18K ohms 1/16W |
| R197 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R198 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| R199 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R200 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R201 | ERJ3GEYJ393 | Carbon | 39K ohms 1/16W |
| R202 | ERJ3GEYJ513 | Carbon | 51K ohms 1/16W |
| R203 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R204,205 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R206 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R208,209 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R211,212 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R213 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R214 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R215 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R216 | YWR0816P133D | Metal | 13K ohms 1/16W |
| R217 | YWR0816R393D | Metal | 39K ohms 1/16W |
| R218 | YWR0816P153D | Metal | 15K ohms 1/16W |
| R219 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R220 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R221 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R222 | YWR0816P133D | Metal | 13K ohms 1/16W |
| R223 | YWR0816R393D | Metal | 39K ohms 1/16W |
| R224 | YWR0816P153D | Metal | 15K ohms 1/16W |
| R225 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R226 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R227 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R228 | YWR0816P133D | Metal | 13K ohms 1/16W |
| R229 | YWR0816R393D | Metal | 39K ohms 1/16W |
| R230 | YWR0816P153D | Metal | 15K ohms 1/16W |
| R231 | YWR0816R473D | Metal | 47K ohms 1/16W |
| C1 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C2 | SK31C335KRA | Electrolytic | 3.3 μF 16V |
| C3 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C4-7 | YW5CH151J5VB | Ceramic | 150 pF |
| C8,9 | YW5F104Z2VB | Ceramic | 0.1 μF |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C10 | SK21C475KRB | Electrolytic | 4.7 µF 16V |
| C11-14 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C15 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C16 | YWSK1C106KRC | Electrolytic | 10 µF 16V |
| C17 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C18 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C19 | YW5CH151J5VB | Ceramic | 150 pF |
| C22 | YWSK1C106KRC | Electrolytic | 10 µF 16V |
| C24-29 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C30 | YWSK1V104KRA | Electrolytic | 0.1 µF 35V |
| C31-33 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C36 | YWSK1V105KRB | Electrolytic | 1 µF 35V |
| C37 | SK21C475KRB | Electrolytic | 4.7 µF 16V |
| C39,41 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C43-46 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C47 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C48 | YW5X102K5VB | Ceramic | 1000 pF |
| C49 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C50 | YW5X223K2VB | Ceramic | 0.022 µF |
| C51,52 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C53 | YW5UJ180J5VB | Ceramic | 18 pF |
| C54 | YW5UJ120J5VB | Ceramic | 12 pF 50V |
| C55 | SK20J106KRB | Electrolytic | 10 µF 6.3V |
| C56 | SK21C225KRA | Electrolytic | 2.2 µF 16V |
| C57 | YW5CH040D5VB | Ceramic | 4 pF |
| C59 | SK20J336KRC | Electrolytic | 33 µF 6.3V |
| C60 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C61,62 | YW5X103K2VB | Ceramic | 0.01 µF |
| C63 | SK20J686KRD0 | Electrolytic | 68 µF 6.3V |
| C64 | SK1V685KRD0 | Electrolytic | 6.8 µF 35V |
| C65 | ECEV0JV220 | Electrolytic | 22 µF 6.3V |
| C66 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C67 | ECEV0JV220 | Electrolytic | 22 µF 6.3V |
| C68,69 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C70 | ECEV0JV220 | Electrolytic | 22 µF 6.3V |
| CT1 | ECRJA010A12 | Trimmer Capacitor | |
| L1 | ELJFA470KF | Coil | 47 µH |
| L2,3 | YWNL321R0J | Coil | 320 µH |
| SW1 | YWSKQDPA | Push Switch | |
| X1 | YWCSTCS8MT | Oscillator | |
| CN1-3 | YW51756394 | 24-pin Connector | |
| CN4-6 | YW71756436 | 16-pin Connector | |
| BAT1 | BR30321F2 | Battery | |
| TP1-6 | YWRCT2125TPV | Test- Pin | |

## PREAMP / ENCODER BOARD

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| PCB4 (RTL) | YWVKBE550E3A | Printed Circuit Board Assy |
| IC1 | NJM2904M | IC |
| IC2 | UPD74HC4049G | IC |
| IC3 | YWM51272FP | IC |
| IC4 | YWUPD4050BG | IC |
| IC5 | YWUPD4053BG | IC |
| IC6 | YWCXA1229M | IC |
| IC8-10 | YWUPD4052BG | IC |
| IC11 | YWTC4W53FL | IC |
| IC401 | YWUPC4062G2 | IC |
| Q1 | 2SB766-RS | Transistor |
| Q3 | 2SD1819-QRS | Transistor |
| Q4 | 2SB1218-QRS | Transistor |
| Q5 | 2SD1819-QRS | Transistor |
| Q6 | 2SB1218-QRS | Transistor |
| Q7 | 2SD1819-QRS | Transistor |
| Q8 | 2SA1532-CD | Transistor |
| Q9,11 | 2SC3931-CD | Transistor |
| Q12-18 | 2SC3931-CD | Transistor |
| Q19 | XP4601 | Transistor |
| Q20 | 2SD1820-QRS | Transistor |
| Q21 | 2SB1219-QRS | Transistor |
| Q22-25 | 2SD1819-QRS | Transistor |
| Q26-28 | 2SC3931-CD | Transistor |
| Q29 | 2SA1532-CD | Transistor |
| Q30,32 | 2SC3931-CD | Transistor |
| Q33-35 | 2SC3931-CD | Transistor |
| Q36 | 2SD1819-QRS | Transistor |
| Q42,44 | 2SC3931-CD | Transistor |
| Q46-49 | 2SC3931-CD | Transistor |
| Q50 | XP4601 | Transistor |
| Q51 | 2SD1820-QRS | Transistor |
| Q52 | 2SB1219-QRS | Transistor |
| Q53-55 | 2SC3931-CD | Transistor |
| Q56 | XP4601 | Transistor |
| Q57 | 2SD1820-QRS | Transistor |
| Q58 | 2SB1219-QRS | Transistor |
| Q59-61 | 2SC3931-CD | Transistor |
| Q62 | XP4601 | Transistor |
| Q63 | 2SD1820-QRS | Transistor |
| Q64 | 2SB1219-QRS | Transistor |
| Q65-67 | 2SC3931-CD | Transistor |
| Q68 | XP4601 | Transistor |
| Q69 | 2SD1820-QRS | Transistor |
| Q70 | 2SB1219-QRS | Transistor |
| Q71-73 | 2SC3931-CD | Transistor |
| Q74 | XP4601 | Transistor |
| Q75 | 2SD1820-QRS | Transistor |
| Q76 | 2SB1219-QRS | Transistor |
| Q77 | 2SC3931-CD | Transistor |
| Q78-81 | 2SA1532-CD | Transistor |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| Q82 | 2SC3931-CD | Transistor |
| Q83,84 | 2SA1532-CD | Transistor |
| Q85-87 | 2SC3931-CD | Transistor |
| Q401 | 2SA1532-CD | Transistor |
| Q402 | 2SB766A-QR | Transistor |
| Q403 | 2SD1819-QRS | Transistor |
| Q404 | 2SD874A-RS | Transistor |
| Q405 | 2SB1218-QRS | Transistor |
| Q501 | 2SA1532-CD | Transistor |
| Q502 | 3SK157 | FET |
| Q503 | 2SC3931-CD | Transistor |
| Q504 | 2SA1532-CD | Transistor |
| Q505 | 3SK157 | FET |
| Q506 | 2SC3931-CD | Transistor |
| Q507,508 | 2SD1819-QRS | Transistor |
| Q509,510 | 2SC3931-CD | Transistor |
| Q511-513 | 2SA1532-CD | Transistor |
| Q514 | 2SC3931-CD | Transistor |
| Q515 | 2SA1532-CD | Transistor |
| Q516,517 | 2SC3931-CD | Transistor |
| Q518 | 2SA1532-CD | Transistor |
| Q519 | 3SK157 | FET |
| Q520 | 2SC3931-CD | Transistor |
| Q601 | 2SA1532-CD | Transistor |
| Q602 | 3SK157 | FET |
| Q603 | 2SC3931-CD | Transistor |
| Q604 | 2SA1532-CD | Transistor |
| Q605 | 3SK157 | FET |
| Q606 | 2SC3931-CD | Transistor |
| Q607,608 | 2SD1819-QRS | Transistor |
| Q609,610 | 2SC3931-CD | Transistor |
| Q611-613 | 2SA1532-CD | Transistor |
| Q614 | 2SC3931-CD | Transistor |
| Q615 | 2SA1532-CD | Transistor |
| Q616,617 | 2SC3931-CD | Transistor |
| Q618 | 2SA1532-CD | Transistor |
| Q619 | 3SK157 | FET |
| Q620 | 2SC3931-CD | Transistor |
| Q701 | 2SA1532-CD | Transistor |
| Q702 | 3SK157 | FET |
| Q703 | 2SC3931-CD | Transistor |
| Q704 | 2SA1532-CD | Transistor |
| Q705 | 3SK157 | FET |
| Q706 | 2SC3931-CD | Transistor |
| Q707,708 | 2SD1819-QRS | Transistor |
| Q709,710 | 2SC3931-CD | Transistor |
| Q711-713 | 2SA1532-CD | Transistor |
| Q714 | 2SC3931-CD | Transistor |
| Q715 | 2SA1532-CD | Transistor |
| Q716,717 | 2SC3931-CD | Transistor |
| Q718 | 2SA1532-CD | Transistor |
| Q719 | 3SK157 | FET |
| Q720 | 2SC3931-CD | Transistor |
| D1,3 | MA143 | Diode |
| D5,8 | MA143 | Diode |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| D9 | MA143 | Diode | |
| R1,2 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R3 | YWR0816P472D | Metal | 4.7K ohms 1/16W |
| R4 | YWR0816P512D | Metal | 5.1K ohms 1/16W |
| R5 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R6 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R7 | YWR0816R393D | Metal | 39K ohms 1/16W |
| R8 | YWR0816P303D | Metal | 30K ohms 1/16W |
| R9 | YWR0816P101D | Metal | 100 ohms 1/16W |
| R11 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R13 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R14 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R15 | ERJ3GEYJ392 | Carbon | 3.9K ohms 1/16W |
| R16 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R17 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R18 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R19 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R20 | ERJ3GEYJ182 | Carbon | 1.8K ohms 1/16W |
| R21 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R22 | ERJ3GEYJ392 | Carbon | 3.9K ohms 1/16W |
| R23 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R24 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R25 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R26 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R27 | ERJ3GEYJ182 | Carbon | 1.8K ohms 1/16W |
| R28-30 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R31 | ERJ3GEYJ392 | Carbon | 3.9K ohms 1/16W |
| R32 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R33 | ERJ3GEYJ822 | Carbon | 8.2K ohms 1/16W |
| R34 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R35 | ERJ3GEYJ432 | Carbon | 4.3K ohms 1/16W |
| R36 | ERJ3GEYJ242 | Carbon | 2.4K ohms 1/16W |
| R39,40 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R41 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R42 | ERJ3GEYJ622 | Carbon | 6.2K ohms 1/16W |
| R43 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R44 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R45 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R46,47 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R48 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R49 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R50,51 | ERJ3GEYJ362 | Carbon | 3.6K ohms 1/16W |
| R52 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R54 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R55 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R56 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R57 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R58-61 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R62,63 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R64 | ERJ3GEYJ392 | Carbon | 3.9K ohms 1/16W |
| R65-67 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R68 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R69,70 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R71 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R72-74 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R75 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R76 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R77-79 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R80,81 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R82,84 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R86,87 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R88 | ERJ3GEYJ563 | Carbon | 56K ohms 1/16W |
| R89 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R90 | ERJ3GEYJ471 | Carbon | 470 ohms 1/16W |
| R91 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R92 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R93 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R94 | ERJ3GEYJ561 | Carbon | 560 ohms 1/16W |
| R95,96 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R97,98 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R99 | ERJ3GEYJ392 | Carbon | 3.9K ohms 1/16W |
| R100 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R101 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R102 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R103 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R104 | ERJ3GEYJ242 | Carbon | 2.4K ohms 1/16W |
| R105 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R107 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R108 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R109 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R110 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R112 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R113 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R114 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R115 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R117-119 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R120 | ERJ3GEYJ182 | Carbon | 1.8K ohms 1/16W |
| R121,122 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R123 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R127 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R170 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R172 | YWR0816P273D | Metal | 27K ohms 1/16W |
| R173 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R174 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R176 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R177 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R178 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R179 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R180-183 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R185 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R187 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R188 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R189 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R190 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R191 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R192-195 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R197 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R198 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R200 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R201 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R202 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R203 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R204-207 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R209 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R210 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R212 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R213 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R214 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R215 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R216-219 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R221 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R222 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R224 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R225 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R226 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R227 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R228-231 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R232 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R233 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R234,235 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R236 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R237 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R238,239 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R240 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R241 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R242 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R243 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R244 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R245 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R246 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R247 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R248 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R249 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R250 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R251 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R252 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R253,254 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R255 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R256 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R257 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R258 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R259 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R260 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R261 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R262,263 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R264 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R265 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R266 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R267 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R268 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R269,270 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R271 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R272 | ERJ3GEYJ122 | Carbon | 1.2K ohms 1/16W |
| R275 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R275 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R401 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R402 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R403 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R404 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R405 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R406 | YWR0816P912D | Metal | 9.1K ohms 1/16W |
| R407 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R408 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R409 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R410 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R411 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R412 | YWR0816P912D | Metal | 9.1K ohms 1/16W |
| R413 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R414 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R415 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R501 | ERJ3GEYJ241 | Carbon | 240 ohms 1/16W |
| R502 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R503 | ERJ3GEYJ242 | Carbon | 2.4K ohms 1/16W |
| R504 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R505,506 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R507 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R508 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R509 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R510 | ERJ3GEYJ303 | Carbon | 30K ohms 1/16W |
| R511 | ERJ3GEYJ220 | Carbon | 22 ohms 1/16W |
| R512 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R513 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R514 | ERJ3GEYJ330 | Carbon | 33 ohms 1/16W |
| R515 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R516 | ERJ3GEYJ151 | Carbon | 150 ohms 1/16W |
| R517 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R518 | ERJ3GEYJ155 | Carbon | 1.5M ohms 1/16W |
| R519 | ERJ3GEYJ302 | Carbon | 3K ohms 1/16W |
| R520 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R521 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R522 | ERJ3GEYJ752 | Carbon | 7.5K ohms 1/16W |
| R523 | ERJ3GEYJ561 | Carbon | 560 ohms 1/16W |
| R524 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R525 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R526 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R527 | ERJ3GEYJ751 | Carbon | 750 ohms 1/16W |
| R528 | ERJ3GEYJ752 | Carbon | 7.5K ohms 1/16W |
| R529 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R530 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R531,532 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R533 | ERJ3GEYJ822 | Carbon | 8.2K ohms 1/16W |
| R534 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R535,536 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R537 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R538 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R539 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R540 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R541 | ERJ3GEYJ330 | Carbon | 33 ohms 1/16W |
| R542 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R601 | ERJ3GEYJ241 | Carbon | 240 ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R602 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R603 | ERJ3GEYJ242 | Carbon | 2.4K ohms 1/16W |
| R604 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R605,606 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R607 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R608 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R609 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R610 | ERJ3GEYJ303 | Carbon | 30K ohms 1/16W |
| R611 | ERJ3GEYJ220 | Carbon | 22 ohms 1/16W |
| R612 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R613 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R614 | ERJ3GEYJ330 | Carbon | 33 ohms 1/16W |
| R615 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R616 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R617 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R618 | ERJ3GEYJ155 | Carbon | 1M ohms 1/16W |
| R619 | ERJ3GEYJ302 | Carbon | 3K ohms 1/16W |
| R620 | ERJ3GEYJ271 | Carbon | 270 ohms 1/16W |
| R621 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R622 | ERJ3GEYJ752 | Carbon | 7.5K ohms 1/16W |
| R623 | ERJ3GEYJ561 | Carbon | 560 ohms 1/16W |
| R624 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R625 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R626 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R627 | ERJ3GEYJ751 | Carbon | 750 ohms 1/16W |
| R628 | ERJ3GEYJ752 | Carbon | 7.5K ohms 1/16W |
| R629 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R630 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R631,632 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R633 | ERJ3GEYJ822 | Carbon | 8.2K ohms 1/16W |
| R634 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R635,636 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R637 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R638 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R639 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R640 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R641 | ERJ3GEYJ330 | Carbon | 33 ohms 1/16W |
| R642 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R701 | ERJ3GEYJ241 | Carbon | 240 ohms 1/16W |
| R702 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R703 | ERJ3GEYJ242 | Carbon | 2.4K ohms 1/16W |
| R704 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R705,706 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R707 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R708 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R709 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R710 | ERJ3GEYJ303 | Carbon | 30K ohms 1/16W |
| R711 | ERJ3GEYJ220 | Carbon | 22 ohms 1/16W |
| R712 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R713 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R714 | ERJ3GEYJ330 | Carbon | 33 ohms 1/16W |
| R715 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R716 | ERJ3GEYJ151 | Carbon | 150 ohms 1/16W |
| R717 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R718 | ERJ3GEYJ155 | Carbon | 1M ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R719 | ERJ3GEYJ302 | Carbon | 3K ohms 1/16W |
| R720 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R721 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R722 | ERJ3GEYJ752 | Carbon | 7.5K ohms 1/16W |
| R723 | ERJ3GEYJ561 | Carbon | 560 ohms 1/16W |
| R724 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R725 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R726 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R727 | ERJ3GEYJ751 | Carbon | 750 ohms 1/16W |
| R728 | ERJ3GEYJ752 | Carbon | 7.5K ohms 1/16W |
| R729 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R730 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R731,732 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R733 | ERJ3GEYJ822 | Carbon | 8.2K ohms 1/16W |
| R734 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R735,736 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R737 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R738 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R739 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R740 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R741 | ERJ3GEYJ330 | Carbon | 33 ohms 1/16W |
| R742 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| VR1-4 | EVM7JGA30B23 | Variable Resistor | 2K ohms |
| VR5 | EVM7JGA30B13 | Variable Resistor | 1K ohms |
| VR6 | YWRH03AVAS3W | Variable Resistor | 4.7K ohms |
| VR7,8 | YWRH03AVA15W | Variable Resistor | 100K ohms |
| VR9 | EVM7JGA30B23 | Variable Resistor | 2K ohms |
| VR10,12 | EVM7JGA30B13 | Variable Resistor | 1K ohms |
| VR13,14 | EVM7JGA30B13 | Variable Resistor | 1K ohms |
| VR9 | EVM7JGA30B53 | Variable Resistor | 5K ohms |
| VR21-23 | EVM7JGA30B23 | Variable Resistor | 2K ohms |
| VR24,25 | EVM7JGA30B14 | Variable Resistor | 10K ohms |
| VR501,601 | YWST3A101 | Variable Resistor | 100 ohms |
| VR701 | YWST3A101 | Variable Resistor | 100 ohms |
| C1 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C2 | ECEV1CV470 | Electrolytic | 47 μF 16V |
| C3 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C4 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C5 | ECEV0JV470S | Electrolytic | 47 μF 6.3V |
| C6 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C7 | YWSK0G106KRB | Electrolytic | 10 μF 4V |
| C8 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C9 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C10 | YW5CH680J5VB | Ceramic | 68 pF |
| C11 | YW5CH270J5VB | Ceramic | 27 pF |
| C12 | YW5CH680J5VB | Ceramic | 68 pF |
| C13 | YW5CH270J5VB | Ceramic | 27 pF |
| C14,15 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C16,17 | YW5CH470J5VB | Ceramic | 47 pF |
| C18 | YW5CH150J5VB | Ceramic | 15 pF |
| C19 | YW5CH100J5VB | Ceramic | 10 pF |
| C20 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C22,23 | YW5CH050D5VB | Ceramic | 5 pF |
| C24 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C25 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C27 | YW5CH030D5VB | Ceramic | 3 pF |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C28-30 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C31,32 | YW5CH470J5VB | Ceramic | 47 pF |
| C33 | YW5CH150J5VB | Ceramic | 15 pF |
| C34 | YW5CH620J5VB | Ceramic | 62 pF |
| C35 | YW5CH221J5VB | Ceramic | 220 pF |
| C36,37 | YW5CH470J5VB | Ceramic | 47 pF |
| C38 | YW5CH150J5VB | Ceramic | 15 pF |
| C39 | YW5CH620J5VB | Ceramic | 62 pF |
| C40 | YW5CH221J5VB | Ceramic | 220 pF |
| C41,42 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C43,44 | YW5X103K2VB | Ceramic | 0.01 μF |
| C45,46 | ECEV1HV010 | Electrolytic | 1 μF 50V |
| C47,48 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C49-51 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C52,53 | ECEV1CV470 | Electrolytic | 47 μF 16V |
| C54 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C55 | ECEV1HV010 | Electrolytic | 1 μF 50V |
| C56 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C57 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C58,59 | YW5CH470J5VB | Ceramic | 47 pF |
| C60 | YW5CH150J5VB | Ceramic | 15 pF |
| C61 | YW5CH080D5VB | Ceramic | 8 pF |
| C62 | ECEV1CN100 | Electrolytic | 10 μF 16V |
| C64 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C65 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C66 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C67 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C68 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C69 | YW5CH151J5VB | Ceramic | 150 pF |
| C70 | YW5CH390J5VB | Ceramic | 39 pF |
| C71 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C88-90 | ECEV1HV010 | Electrolytic | 1 μF 50V |
| C91,92 | ECEV1CV470 | Electrolytic | 47 μF 16V |
| C93 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C94 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C95 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C96 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C97 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C98,99 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C100 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C101 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C102 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C103 | ECEV0JV330 | Electrolytic | 33 μF 6.3V |
| C104 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C105,106 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C107,109 | YW5CH020D5VB | Ceramic | 2 pF |
| C111,113 | YW5CH020D5VB | Ceramic | 2 pF |
| C115 | YW5CH020D5VB | Ceramic | 2 pF |
| C116,118 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C119,120 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C121 | YW5CH470J5VB | Ceramic | 47 pF |
| C122 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C123-125 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C126,127 | ECEV1AG101 | Electrolytic | 100 μF 10V |
| C128,129 | ECEV1CV470 | Electrolytic | 47 μF 16V |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| C401 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C402 | SK21D226KRD0 | Electrolytic 22 μF |
| C403 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C404 | SK21C336KRD0 | Electrolytic 33 μF |
| C405 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C406,407 | ECEV1AG101 | Electrolytic 100 μF 10V |
| C501 | YW5CH180J5VB | Ceramic 18 pF |
| C502 | YW5CH150J5VB | Ceramic 15 pF |
| C503 | YW5CH180J5VB | Ceramic 18 pF |
| C504 | YW5F104Z2VB | Ceramic 0.1 μF |
| C505 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C506 | YWSK1E155MRB | Electrolytic 1.5 μF 25V |
| C507 | YW5CH390J5VB | Ceramic 39 pF |
| C508 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C509 | YW5F104Z2VB | Ceramic 0.1 μF |
| C510 | YW5CH220J5VB | Ceramic 22 pF |
| C511 | ECEV1CV470 | Electrolytic 47 μF 16V |
| C512 | YW5CH100J5VB | Ceramic 10 pF |
| C514 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C515,516 | YW5F104Z2VB | Ceramic 0.1 μF |
| C518 | YW5CH220J5VB | Ceramic 22 pF |
| C601 | YW5CH180J5VB | Ceramic 18 pF |
| C602 | YW5CH150J5VB | Ceramic 15 pF |
| C603 | YW5CH180J5VB | Ceramic 18 pF |
| C604 | YW5F104Z2VB | Ceramic 0.1 μF |
| C605 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C606 | YWSK1E155MRB | Electrolytic 1.5 μF 25V |
| C607 | YW5CH390J5VB | Ceramic 39 pF |
| C608 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C609 | YW5F104Z2VB | Ceramic 0.1 μF |
| C610 | YW5CH220J5VB | Ceramic 22 pF |
| C611 | ECEV1CV470 | Electrolytic 47 μF 16V |
| C612 | YW5CH100J5VB | Ceramic 10 pF |
| C614 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C615,616 | YW5F104Z2VB | Ceramic 0.1 μF |
| C618 | YW5CH220J5VB | Ceramic 22 pF |
| C701 | YW5CH180J5VB | Ceramic 18 pF |
| C702 | YW5CH150J5VB | Ceramic 15 pF |
| C703 | YW5CH180J5VB | Ceramic 18 pF |
| C704 | YW5F104Z2VB | Ceramic 0.1 μF |
| C705 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C706 | YWSK1E155MRB | Electrolytic 0.1 μF |
| C707 | YW5CH390J5VB | Ceramic 39 pF |
| C708 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C709 | YW5F104Z2VB | Ceramic 0.1 μF |
| C710 | YW5CH220J5VB | Ceramic 22 pF |
| C711 | ECEV1CV470 | Electrolytic 47 μF 16V |
| C712 | YW5CH100J5VB | Ceramic 10 pF |
| C714 | ECEV1CV100 | Electrolytic 10 μF 16V |
| C715,716 | YW5F104Z2VB | Ceramic 0.1 μF |
| C718 | YW5CH220J5VB | Ceramic 22 pF |
| CT1,501 | TZBX4R500BAT | Trimmer Capacitor |
| CT601,701 | TZBX4R500BAT | Trimmer Capacitor |
| DL5 | ELB4A514 | Delay Line |
| L1-4 | YWNL325R6J | Coil |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| L501,601 | YWNL322R7J | Coil |
| L701 | YWNL322R7J | Coil |
| CF1 | ELB4A518 | Filter |
| CF501 | YWCY4S567 | Filter |
| CF502 | YWCY4T566 | Filter |
| CF601 | YWCY4S567 | Filter |
| CF602 | YWCY4T566 | Filter |
| CF701 | YWCY4S567 | Filter |
| CF702 | YWCY4T566 | Filter |
| CN1-3 | YW51756394 | 24-pin Connector |
| CN6-8 | YW21763142 | 22-pin Connector |
| CN10 | YW522050890 | 8-pin Connector |
| CN11 | YW41756392 | 12-pin Connector |
| CN12 | YW51756394 | 24-pin Connector |
| TP1-12 | YWRCT2125TPV | Test-pin |
| TP401,501 | YWRCT2125TPV | Test-pin |
| TP502,601 | YWRCT2125TPV | Test-pin |
| TP602,701 | YWRCT2125TPV | Test-pin |
| TP702 | YWRCT2125TPV | Test-pin |

## SYNC BOARD

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| PCB5 (RTL) | YWVKCE550E3A | Printed Circuit Board Assy |
| IC1 | YWTC7S04F | IC |
| IC3 | MN73093 | IC |
| IC4 | YWTC7SU04FL | IC |
| IC5 | NJM2904M | IC |
| IC6 | YWTC4S66FR | IC |
| IC7 | YWUPC4062G2 | IC |
| IC8 | YWUPD74HC04G | IC |
| IC11 | YWLM1881M | IC |
| IC12 | NJM2904M | IC |
| IC13 | YWTC4S11F | IC |
| IC14 | YWUPD74HC32G | IC |
| IC15 | YWTC7W08F | IC |
| IC23 | YWTC7S04F | IC |
| IC24 | YWTC7S08F | IC |
| IC25,26 | UPD74HC164G | IC |
| IC27 | YWTC7W04FL | IC |
| IC28-30 | UPD74HC164G | IC |
| IC31 | YWTC7S04F | IC |
| Q2 | 2SB1218-QRS | Transistor |
| Q3-6 | 2SK662-PQR | FET |
| Q7 | 2SD1819-QRS | Transistor |
| Q8 | 2SB1218-QRS | Transistor |
| Q9 | 2SB766-RS | Transistor |
| Q10 | 2SC3931-CD | Transistor |
| Q13 | 2SB1218-QRS | Transistor |
| Q15,16 | 2SC3931-CD | Transistor |
| Q17 | 2SB1218-QRS | Transistor |
| D1-6 | MA372 | Diode |
| D8 | MA141K | Diode |
| R1 | ERJ3GEYJ103 | Carbon 10K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R2,3 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R4 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R5,6 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R7,8 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R11 | YWR0816P822D | Metal | 8.2K ohms 1/16W |
| R12 | YWR0816P332D | Metal | 3.3K ohms 1/16W |
| R13 | YWR0816P752D | Metal | 7.5K ohms 1/16W |
| R15 | YWR0816P751D | Metal | 750 ohms 1/16W |
| R16 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R17 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R18 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R19,20 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R21 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| R22 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R23-25 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R28 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R29,30 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R31 | ERJ3GEYJ184 | Carbon | 180K ohms 1/16W |
| R32 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R33,34 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R35 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R36 | ERJ3GEYJ511 | Carbon | 510 ohms 1/16W |
| R37 | ERJ3GEYJ334 | Carbon | 330K ohms 1/16W |
| R38 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R39 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R40 | ERJ3GEYJ823 | Carbon | 82K ohms 1/16W |
| R41 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R42 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R43 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R45 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R47 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| R48,49 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R50 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R51 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R52 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| R53 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R54 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R56-58 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R59 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R60-62 | YWR0816R104D | Metal | 100K ohms 1/16W |
| R63 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R64 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R65 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R66 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R67 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R68 | ERJ3GEYJ684 | Carbon | 680K ohms 1/16W |
| R69 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R70 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R71 | ERJ3GEYJ182 | Carbon | 1.8K ohms 1/16W |
| R72 | ERJ3GEYJ752 | Carbon | 7.5K ohms 1/16W |
| R73 | ERJ3GEYJ303 | Carbon | 30K ohms 1/16W |
| R74 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R75 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R77 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R78,79 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R81-83 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R84 | YWR0816R513D | Metal | 51K ohms 1/16W |
| R85 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R86 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R89 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R91 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R92 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R94 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R95 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R96 | ERJ3GEYJ272 | Carbon | 2.7K ohms 1/16W |
| R100 | ERJ3GEYJ561 | Carbon | 560 ohms 1/16W |
| R101 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R104 | ERJ3GEYJ560 | Carbon | 56 ohms 1/16W |
| R105 | ERJ3GEYJ912 | Carbon | 9.1K ohms 1/16W |
| R106 | ERJ3GEYJ512 | Carbon | 5.1K ohms 1/16W |
| R107 | ERJ3GEYJ182 | Carbon | 1.8K ohms 1/16W |
| R108 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R109 | ERJ3GEYJ820 | Carbon | 82 ohms 1/16W |
| R110 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R111,112 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R118 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R120 | ERJ3GEYJ152 | Carbon | 1.5K ohms 1/16W |
| R121 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R122 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R123 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R127 | YWR0816P221D | Metal | 220 ohms 1/16W |
| R128 | YWR0816P182D | Metal | 1.8K ohms 1/16W |
| R130 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R131,132 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R137 | ERJ3GEYJ562 | Carbon | 5.6K ohms 1/16W |
| R138 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R141 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R142 | ERJ3GEYJ334 | Carbon | 330K ohms 1/16W |
| R143 | ERJ3GEYJ224 | Carbon | 220K ohms 1/16W |
| R144 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R145,146 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R148 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R149 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R162 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R164,165 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R167-170 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R171 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R172-174 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R179 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R180 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| VR1 | EVM7JGA30B14 | Variable Resistor | 10K ohms |
| C1,2 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C3 | YW5CH150J5VB | Ceramic | 15 pF |
| C4 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C5 | YW5X122K5VB | Ceramic | 1200 pF |
| C6 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C8,9 | YW5CH331J5VB | Ceramic | 330 pF |
| C10 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C12 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C13 | YW5X103K2VB | Ceramic | 0.01 μF |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C14 | YW5CH331J5VB | Ceramic | 330 pF |
| C15 | YWSK1C106KRC | Electrolytic | 10 µF 16V |
| C16 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C17 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C18 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C19 | SK21C225KRA | Electrolytic | 2.2 µF 16V |
| C20 | YW5X103K2VB | Ceramic | 0.01 µF |
| C21 | SK21C225KRA | Electrolytic | 2.2 µF 16V |
| C22 | YW5CH201J5VB | Ceramic | 200 pF |
| C23 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C24 | YW5CH201J5VB | Ceramic | 200 pF |
| C25 | YW5CH060D5VB | Ceramic | 6 pF |
| C26,27 | YW5CH121J5VB | Ceramic | 120 pF |
| C29,30 | YWSK1C106KRC | Electrolytic | 10 µF 16V |
| C31 | ECEV1EV4R7 | Electrolytic | 4.7 µF 25V |
| C32 | YW5X102K5VB | Ceramic | 1000 pF |
| C33 | SK31A475KRA | Electrolytic | 4.7 µF 10V |
| C34,37 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C38,39 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C40 | ECEV0JN100S | Electrolytic | 10 µF 6.3V |
| C41 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C42 | ECEV0JV330 | Electrolytic | 33 µF 6.3V |
| C43,44 | ECEV1CV100 | Electrolytic | 10 µF 16V |
| C45,47 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C49 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C50 | ECEV1CV100 | Electrolytic | 10 µF 16V |
| C51 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C52 | ECEV1CV100 | Electrolytic | 10 µF 16V |
| C53 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C56 | YW5CH150J5VB | Ceramic | 15 pF |
| C74 | YWSK1C105KRA | Electrolytic | 1 µF 16V |
| C75 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C76 | YW5X102K5VB | Ceramic | 1000 pF |
| C77-81 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C82 | YW5CH150J5VB | Ceramic | 15 pF |
| L1 | EIC4EJ003E | Coil | |
| L2,4 | ELJFC8R2MF | Coil | |
| L5,6 | YWBLM21B03PB | Coil | |
| X1 | YWDX17R734 | Crystal Oscillator | |
| X2 | YWDX14R187 | Crystal Oscillator | |
| CF1 | YWNL4532S4R4 | Filter | |
| CN1-3 | YW51763132 | Connector | |
| TP1-6 | YWRCT2125TPV | Test- Pin | |
| TP8,10 | YWRCT2125TPV | Test- Pin | |

## POWER BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB6 (RTL) | YWVKBE550P4A | Printed Circuit Board Assy | |
| IC1,2 | YWMB3782PF | IC | |
| IC3 | YWNJM2902N | IC | |
| Q3 | 2SD1819-QRS | Transistor | |
| Q4 | 2SB1218-QRS | Transistor | |
| Q5 | 2SJ128 | Transistor | |
| Q6 | 2SD1819-QRS | Transistor | |
| Q7 | 2SB1218-QRS | Transistor | |
| Q8 | 2SJ132 | FET | |
| Q9 | 2SA1615-LK | Transistor | |
| Q10,11 | 2SD1819-QRS | Transistor | |
| Q12 | 2SB1218-QRS | Transistor | |
| Q13 | 2SJ132 | FET | |
| Q14 | 2SA1615-LK | Transistor | |
| Q15 | 2SD1819-QRS | Transistor | |
| Q16 | 2SJ132 | FET | |
| Q17,18 | 2SD1819-QRS | Transistor | |
| Q19 | 2SB1218-QRS | Transistor | |
| Q20 | 2SJ128 | Transistor | |
| Q21 | 2SD1819-QRS | Transistor | |
| Q22 | 2SB1218-QRS | Transistor | |
| Q23-25 | 2SJ132 | FET | |
| Q26 | 2SA1615-LK | Transistor | |
| Q27 | 2SD1819-QRS | Transistor | |
| Q28 | 2SB1218-QRS | Transistor | |
| Q29 | 2SC3074Y | Transistor | |
| Q30 | 2SA1615-LK | Transistor | |
| Q31 | 2SD1819-QRS | Transistor | |
| Q39 | 2SA1615-LK | Transistor | |
| D1-6 | YWSC80204R | Diode | |
| D8,9 | YWSC80204R | Diode | |
| R1 | YWR0816R104D | Metal | 100K ohms 1/16W |
| R2 | YWR0816R363D | Metal | 36K ohms 1/16W |
| R3 | YWR0816R104D | Metal | 100K ohms 1/16W |
| R4 | YWR0816R623D | Metal | 62K ohms 1/16W |
| R5 | YWR0816R104D | Metal | 100K ohms 1/16W |
| R6 | YWR0816P303D | Metal | 30K ohms 1/16W |
| R7 | YWR0816R104D | Metal | 100K ohms 1/16W |
| R8 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R9 | YWR0816R104D | Metal | 100K ohms 1/16W |
| R10 | YWR0816R563D | Metal | 56K ohms 1/16W |
| R11 | YWR0816R104D | Metal | 100K ohms 1/16W |
| R12 | YWR0816R563D | Metal | 56K ohms 1/16W |
| R13 | YWR0816P332D | Metal | 3.3K ohms 1/16W |
| R14 | YWR0816P362D | Metal | 3.6K ohms 1/16W |
| R23,24 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R25 | ERJ3GEYJ511 | Carbon | 510 ohms 1/16W |
| R26-31 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R32 | YWR0816P682D | Metal | 6.8K ohms 1/16W |
| R33-37 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R38 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R39 | YWR0816R513D | Metal | 51K ohms 1/16W |
| R40 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R41 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R42 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R43,44 | YWR0816P243D | Metal | 24K ohms 1/16W |
| R45 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R46 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R47 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R48 | YWR0816R433D | Metal | 43K ohms 1/16W |
| R49 | YWR0816P153D | Metal | 15K ohms 1/16W |
| R50 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R51 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R52 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R53,54 | YWR0816P333D | Metal | 33K ohms 1/16W |
| R55 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R56 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R57 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R58 | YWR0816P333D | Metal | 33K ohms 1/16W |
| R59 | YWR0816P123D | Metal | 12K ohms 1/16W |
| R60 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R61 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R62 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R63 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R64 | YWR0816P243D | Metal | 24K ohms 1/16W |
| R65 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R66 | YWR0816P153D | Metal | 15K ohms 1/16W |
| R67 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R68-70 | ERJ3GEYJ470 | Carbon | 47 ohms 1/16W |
| R71 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R72 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R73 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R74 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R75 | YWR0816P302D | Metal | 3K ohms 1/16W |
| R76 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R77 | YWR0816P302D | Metal | 3K ohms 1/16W |
| R78 | ERJ3GEYJ471 | Carbon | 470 ohms 1/16W |
| R79 | ERJ3GEYJ680 | Carbon | 68 ohms 1/16W |
| R80 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R81 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R82 | YWR0816P432D | Metal | 4.3K ohms 1/16W |
| R83 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R84 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R85 | YWR0816P302D | Metal | 3K ohms 1/16W |
| R103 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R106 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R107 | ERJ3GEYJ202 | Carbon | 2K ohms 1/16W |
| R116 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R120,121 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| VR1 | YWRH03AVAJ2W | Variable Resistor | 220 ohms |
| VR2 | YWRH03AVAJ3W | Variable Resistor | 2.2K ohms |
| C1 | YW5X103K2VB | Ceramic | 0.01 µF |
| C2 | YW5F473Z2VB | Ceramic | 0.047 µF |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C3,4 | YW5X103K2VB | Ceramic | 0.01 µF |
| C5 | YW5F473Z2VB | Ceramic | 0.047 µF |
| C6 | YW5X103K2VB | Ceramic | 0.01 µF |
| C7 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C9 | YW5F683Z2VB | Ceramic | 0.068 µF |
| C10 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C11,12 | YW5F683Z2VB | Ceramic | 0.068 µF |
| C13 | YW400102CHJT | Ceramic | 1000 pF |
| C14 | YW5F683Z2VB | Ceramic | 0.068 µF |
| C15 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C16,17 | YW5F683Z2VB | Ceramic | 0.068 µF |
| C18 | YW16SA68M | Electrolytic | 68 µF 16V |
| C19 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C20 | YW16SA33M | Electrolytic | 33 µF 16V |
| C21 | YW20SA68M | Electrolytic | 68 µF 20V |
| C22 | YW20SA100M | Electrolytic | 100 µF 20V |
| C23 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C24 | YW16SA100M | Electrolytic | 100 µF 16V |
| C25 | YW5X103K2VB | Ceramic | 0.01 µF |
| C26 | ECA1AFQ331 | Electrolytic | 330 µF 10V |
| C27 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C28 | YW16SA100M | Electrolytic | 100 µF 16V |
| C29 | YW5X103K2VB | Ceramic | 0.01 µF |
| C30 | ECA1AFQ181 | Electrolytic | 180 µF 10V |
| C31 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C32 | UPQ1A331MGH | Electrolytic | 330 µF 10V |
| C33 | YW10SA33M | Electrolytic | 33 µF 10V |
| C34 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C35 | YW10SA100M | Electrolytic | 100 µF 10V |
| C36 | YW5X103K2VB | Ceramic | 0.01 µF |
| C37 | ECA0JFQ471 | Electrolytic | 470 µF 6.3V |
| C38 | UPQ1V101MGH | Electrolytic | 100 µF 35V |
| C39 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C40 | UPQ1V101MGH | Electrolytic | 100 µF 35V |
| C41 | ECA1VFQ560 | Electrolytic | 56 µF 35V |
| C42 | YW5X103K2VB | Ceramic | 0.01 µF |
| C43 | ECA0JFQ681 | Electrolytic | 680 µF 6.3V |
| C46 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C48 | YW5CH200J5VB | Ceramic | 20 pF |
| L1 | S100434182K | Coil | |
| L2 | YWS100529220 | Coil | 22 µH |
| L3 | YWS100518220 | Coil | 22 µH |
| L4 | S100434560K | Coil | 56 µH |
| L5 | S100434391K | Coil | 390 µH |
| L6 | S100434181K | Coil | 180 µH |
| L7 | YWS100518220 | Coil | |
| L8 | YFLH10D500K | Coil | 50 µH |
| L9 | S100434561K | Coil | 560 µH |
| L10 | YWS100529220 | Coil | |
| L11-13 | YWBLM21B03PB | Coil | |
| CN1,2 | YW51756394 | 24-pin Connector | |
| TP1-3 | YWRCT2125TPV | Test- Pin | |
| M19 | YWV6FA0166A4 | Bracket | |

## REAR BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB7 (RTL) | YWVKCE550P4A | Printed Circuit Board Assy | |
| IC1 | YWUPD4053BG | IC | |
| IC2 | YWUPD74HC08G | IC | |
| IC5 | NJM4556M | IC | |
| IC6 | NJM2903M | IC | |
| IC7 | YWUPD4050BG | IC | |
| IC8 | YWTC4S11F | IC | |
| IC9,10 | YWTC4S584FR | IC | |
| IC11,12 | YWTC4S69F | IC | |
| IC13 | YWTC4W53FL | IC | |
| Q1 | IMZ1T9 | Transistor | |
| D1 | LN277RPX | LED | |
| D2 | MA143 | Diode | |
| D3 | MA141K | Diode | |
| D4 | MA143 | Diode | |
| D5-7 | YWERB83004 | Diode | |
| D8,9 | MA143 | Diode | |
| R1 | ERJ3GEYJ751 | Carbon | 750 ohms 1/16W |
| R2,3 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R4 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R5,6 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R7 | ERJ3GEYJ510 | Carbon | 51 ohms 1/16W |
| R8 | YWR0816R513D | Metal | 51K ohms 1/16W |
| R9 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R10 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R11 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R12 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R13,14 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R15,16 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R17-24 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R25,26 | ERJ3GEYJ750 | Carbon | 75 ohms 1/16W |
| R27-31 | ERJ3GEYJ680 | Carbon | 68 ohms 1/16W |
| R32 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R33 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R34 | ERJ3GEYJ680 | Carbon | 68 ohms 1/16W |
| R35 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R36-38 | ERJ3GEYJ680 | Carbon | 68 ohms 1/16W |
| R40,41 | ERJ3GEYJ221 | Carbon | 220 ohms 1/16W |
| R42 | ERJ3GEYJ680 | Carbon | 68 ohms 1/16W |
| C1 | ECEA0JKG470 | Electrolytic | 47 µF 6.3V |
| C2 | YW5CH101J5VB | Ceramic | 100 pF |
| C3 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C4 | ECEA1AKG220 | Electrolytic | 22 µF 10V |
| C5 | YW5X102K5VB | Ceramic | 1000 pF |
| C6 | ECEA0JKG470 | Electrolytic | 47 µF 6.3V |
| C7 | YW5CH101J5VB | Ceramic | 100 pF |
| C8 | ECEA0JKG470 | Electrolytic | 47 µF 6.3V |
| C9-12 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C13 | ECEA1AKG220 | Electrolytic | 22 µF 10V |
| L1 | YWNL32330J | Coil | |
| SW1 | YWSKHHQN | Push Switch | |
| SW2-4 | YWSKHHPP | Push Switch | |
| SW5 | YWSSS222AN | Slide Switch | |
| CF1-3 | NFM6130T472B | Filter | |
| CN1-3 | YW51746434 | 24 pin Connector | |
| CN4 | 10A10TR12SB | 12-pin Connector | |
| CN5 | 10A13TR20PB | 20-pin Connector | |
| CN6 | YWSDEB9S05 | 9-pin Connector | |
| CN7 | YWPCRE28MD | 28-pin Connector | |
| CN8 | HR10A10R12PB | 12-pin Connector | |
| CN9 | YWHR10A7R4PB | 4-pin Connector | |
| CN10-12 | YWBNCDRD | BNC Connector | |
| F1 | YWSSFC1R6AT4 | Current Fuse | 1.6A |
| E1 | YWHDLNA | Fuse Holder | |
| M22 | YWV6FA0167A2 | Bracket for Earth | |
| M23 | YWA2NE0257A4 | Spacer | |

## PRE PROCESS BOARD

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| PCB8 (RTL) | YWVKZE550P2A | Printed Circuit Board Assy |
| IC1 | YWUPD4050BG | IC |
| IC3 | NJM2902M | IC |
| IC5 | NJM2904M | IC |
| IC6 | YWUPC4064G2 | IC |
| IC7 | YWTC4W53FL | IC |
| IC8 | NJM2902M | IC |
| IC101 | NJM2904M | IC |
| IC102 | YWUPD4053BG | IC |
| IC103 | NJM3414M | IC |
| IC104,105 | YWTC4W53FL | IC |
| IC106,201 | NJM2904M | IC |
| IC202 | YWUPD4053BG | IC |
| IC203 | NJM3414M | IC |
| IC204,205 | YWTC4W53FL | IC |
| IC206,301 | NJM2904M | IC |
| IC302 | YWUPD4053BG | IC |
| IC303 | NJM3414M | IC |
| IC304,305 | YWTC4W53FL | IC |
| IC306 | NJM2904M | IC |
| Q1 | 2SB766-RS | Transistor |
| Q2 | 2SD874A-RS | Transistor |
| Q3 | 2SB766-RS | Transistor |
| Q4-6 | 2SB1218-QRS | Transistor |
| Q7,8 | 2SD1819-QRS | Transistor |
| Q9 | 2SB1218-QRS | Transistor |
| Q10-13 | 2SD1819-QRS | Transistor |
| Q14 | 2SB1218-QRS | Transistor |
| Q15-19 | 2SD1819-QRS | Transistor |
| Q101-103 | 2SC3931-CD | Transistor |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| Q104 | 2SK662-PQR | FET | |
| Q105 | XN6534 | Transistor | |
| Q106 | XN6435 | Transistor | |
| Q107 | UMZ1 | Transistor | |
| Q108 | XN6435 | Transistor | |
| Q110 | 2SC3931-CD | Transistor | |
| Q111 | 2SK662-PQR | FET | |
| Q112 | UMZ1 | Transistor | |
| Q113-124 | 2SA1532-CD | Transistor | |
| Q125 | 2SC3931-CD | Transistor | |
| Q126 | XN6435 | Transistor | |
| Q127 | 2SK662-PQR | FET | |
| Q128,201 | 2SC3931-CD | Transistor | |
| Q202,203 | 2SC3931-CD | Transistor | |
| Q204 | 2SK662-PQR | FET | |
| Q205 | XN6534 | Transistor | |
| Q206 | XN6435 | Transistor | |
| Q207 | UMZ1 | Transistor | |
| Q208 | XN6435 | Transistor | |
| Q210 | 2SC3931-CD | Transistor | |
| Q211 | 2SK662-PQR | FET | |
| Q212 | UMZ1 | Transistor | |
| Q213-224 | 2SA1532-CD | Transistor | |
| Q225 | 2SC3931-CD | Transistor | |
| Q226 | XN6435 | Transistor | |
| Q227 | 2SK662-PQR | FET | |
| Q228,301 | 2SC3931-CD | Transistor | |
| Q302,303 | 2SC3931-CD | Transistor | |
| Q304 | 2SK662-PQR | FET | |
| Q305 | XN6534 | Transistor | |
| Q306 | XN6435 | Transistor | |
| Q307 | UMZ1 | Transistor | |
| Q308 | XN6435 | Transistor | |
| Q310 | 2SC3931-CD | Transistor | |
| Q311 | 2SK662-PQR | FET | |
| Q312 | UMZ1 | Transistor | |
| Q313-324 | 2SA1532-CD | Transistor | |
| Q325 | 2SC3931-CD | Transistor | |
| Q326 | XN6435 | Transistor | |
| Q327 | 2SK662-PQR | FET | |
| Q328 | 2SC3931-CD | Transistor | |
| D2,101 | MA141K | Diode | |
| D102,201 | MA141K | Diode | |
| D301,302 | MA141K | Diode | |
| D302 | MA141A | Diode | |
| TH130,230 | L311J101J332 | Thermistor | |
| TH330 | L311J101J332 | Thermistor | |
| R1 | ERJ3GEYJ334 | Carbon | 330K 1/16W |
| R2 | ERJ3GEYJ224 | Carbon | 220K ohms 1/16W |
| R3 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R4 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R5 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R6 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R7 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R8 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R9 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R10 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R11 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R12 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R13 | ERJ3GEYJ334 | Carbon | 330K ohms 1/16W |
| R14 | ERJ3GEYJ224 | Carbon | 220K ohms 1/16W |
| R16 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R17 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R18-22 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R23 | YWR0816R513D | Metal | 51K ohms 1/16W |
| R24 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R25 | YWR0816R363D | Metal | 36K ohms 1/16W |
| R26 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R27,28 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R29 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R30-32 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R33 | YWR0816R623D | Metal | 62K ohms 1/16W |
| R34 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R35 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R36 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R37 | YWR0816P132D | Metal | 1.3K ohms 1/16W |
| R38 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R39 | ERJ3GEYJ332 | Carbon | 3.3K ohms 1/16W |
| R40 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R41 | YWR0816R563D | Metal | 56K ohms 1/16W |
| R42,43 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R44 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R45 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R46 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R47 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R48 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R49 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R50 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R51,52 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R53 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R54,55 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R56,57 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R58 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R59 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R60 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R61 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R62 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R63,64 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R65 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R66,67 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R68,69 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R70 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R71 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R72 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R73 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R74 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R75 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R76 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R77 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R78-81 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R82-93 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R94-96 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R97 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R98 | YWR0816P472D | Metal | 4.7K ohms 1/16W |
| R99 | YWR0816P751D | Metal | 750 ohms 1/16W |
| R101 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R102 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R103 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R104,105 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R106 | YWR0816P101D | Metal | 100 ohms 1/16W |
| R107 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R108 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R109 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R110 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R111,112 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R113 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R114 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R115,116 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R117,118 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R119 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R120,121 | YWR0816P101D | Metal | 100 ohms 1/16W |
| R122 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R123 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R124 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R125 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R126 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R127 | YWR0816P822D | Metal | 8.2K ohms 1/16W |
| R128 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R129 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R131 | YWR0816P752D | Metal | 7.5K ohms 1/16W |
| R132,133 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R135 | YWR0816P472D | Metal | 4.7K ohms 1/16W |
| R136 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R137 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R139 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R140 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R141,142 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R143,144 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R145 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R146 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R147 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R148 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R149 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R150 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R151 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R152 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R153 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R154 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R155 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R156 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R157 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R158 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R159 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R160 | YWR0816P331D | Metal | 330 ohms 1/16W |
| R161 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R162 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R163 | YWR0816P272D | Metal | 2.7K ohms 1/16W |
| R164 | YWR0816P301D | Metal | 300 ohms 1/16W |
| R165 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R166 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R167 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R168 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R169 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R170 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R171,172 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R173 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R174,175 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R176 | YWR0816P182D | Metal | 1.8K ohms 1/16W |
| R177 | YWR0816P471D | Metal | 470 ohms 1/16W |
| R178 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R179 | YWR0816P471D | Metal | 470 ohms 1/16W |
| R180 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R181 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R182 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R183 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R184 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R185 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R186 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R187 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R188 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R189 | ERJ3GEYJ471 | Carbon | 470 ohms 1/16W |
| R190 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R191 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R201 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R202 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R203 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R204,205 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R206 | YWR0816P101D | Metal | 100 ohms 1/16W |
| R207 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R208 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R209 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R210 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R211,212 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R213 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R214 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R215,216 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R217,218 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R219 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R220,221 | YWR0816P101D | Metal | 100 ohms 1/16W |
| R222 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R223 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R224 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R225 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R226 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R227 | YWR0816P822D | Metal | 8.2K ohms 1/16W |
| R228 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R229 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R231 | YWR0816P752D | Metal | 7.5K ohms 1/16W |
| R232,233 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R235 | YWR0816P472D | Metal | 4.7K ohms 1/16W |
| R236 | YWR0816P203D | Metal | 20K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R237 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R238 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R239 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R240 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R241,242 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R243,244 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R245 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R246 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R247 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R248 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R249 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R250 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R251 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R252 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R253 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R254 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R255 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R256 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R257 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R258 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R259 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R260 | YWR0816P331D | Metal | 330 ohms 1/16W |
| R261 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R262 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R263 | YWR0816P272D | Metal | 2.7K ohms 1/16W |
| R264 | YWR0816P301D | Metal | 300 ohms 1/16W |
| R265 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R266 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R267 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R268 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R269 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R270 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R271,272 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R273 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R274,275 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R276 | YWR0816P182D | Metal | 1.8K ohms 1/16W |
| R277 | YWR0816P471D | Metal | 470 ohms 1/16W |
| R278 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R279 | YWR0816P471D | Metal | 470 ohms 1/16W |
| R280 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R281 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R282 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R283 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R284 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R285 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R286 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R287 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R288 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R289 | ERJ3GEYJ471 | Carbon | 470 ohms 1/16W |
| R290 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R301 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R302 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R303 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R304,305 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R306 | YWR0816P101D | Metal | 100 ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R307 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R308 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R309 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R310 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R311,312 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R313 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R314 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R315,316 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R317,318 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R319 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R320,321 | YWR0816P101D | Metal | 100 ohms 1/16W |
| R322 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R323 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R324 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R325 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R326 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R327 | YWR0816P822D | Metal | 8.2K ohms 1/16W |
| R328 | YWR0816R473D | Metal | 47K ohms 1/16W |
| R329 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R331 | YWR0816P752D | Metal | 7.5K ohms 1/16W |
| R332,333 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R335 | YWR0816P472D | Metal | 4.7K ohms 1/16W |
| R336 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R337 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R339 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R340 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R341,342 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R343,344 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R345 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R346 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R347 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R348 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R349 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R350 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R351 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R352 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R353 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R354 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R355 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R356 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R357 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R358 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R359 | YWR0816P222D | Metal | 2.2K ohms 1/16W |
| R360 | YWR0816P331D | Metal | 330 ohms 1/16W |
| R361 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R362 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R363 | YWR0816P272D | Metal | 2.7K ohms 1/16W |
| R364 | YWR0816P301D | Metal | 300 ohms 1/16W |
| R365 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R366 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R367 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R368 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R369 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R370 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R371,372 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R373 | YWR0816P202D | Metal | 2K ohms 1/16W |
| R374,375 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R376 | YWR0816P182D | Metal | 1.8K ohms 1/16W |
| R377 | YWR0816P471D | Metal | 470 ohms 1/16W |
| R378 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R379 | YWR0816P471D | Metal | 470 ohms 1/16W |
| R380 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R381 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R382 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R383 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R384 | YWR0816P152D | Metal | 1.5K ohms 1/16W |
| R385 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R386 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R387 | ERJ3GEY0R00 | Carbon | 0 ohms 1/16W |
| R388 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R389 | ERJ3GEYJ471 | Carbon | 470 ohms 1/16W |
| R390 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R391 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R400 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R401 | YWR0816P121D | Metal | 120 ohms 1/16W |
| R402 | YWR0816P331D | Metal | 330 ohms 1/16W |
| R403 | YWR0816Q470D | Metal | 47 ohms 1/16W |
| R404 | YWR0816P181D | Metal | 180 ohms 1/16W |
| R405 | YWR0816Q470D | Metal | 47 ohms 1/16W |
| R406 | YWR0816P101D | Metal | 100 ohms 1/16W |
| R407 | YWR0816Q150D | Metal | 15 ohms 1/16W |
| VR1-14 | EVM7JGA30B54 | Variable Resistor | 50K ohms |
| VR101 | EVM7JGA30B53 | Variable Resistor | 5K ohms |
| VR102-104 | EVM7JGA30B15 | Variable Resistor | 100K ohms |
| VR105 | EVM7JGA30B14 | Variable Resistor | 10K ohms |
| VR106,107 | EVM7JGA30B15 | Variable Resistor | 100K ohms |
| VR108-110 | EVM7JGA30B13 | Variable Resistor | 1K ohms |
| VR111 | EVM7JGA30B24 | Variable Resistor | 20K ohms |
| VR201 | EVM7JGA30B14 | Variable Resistor | 10K ohms |
| VR202-204 | EVM7JGA30B15 | Variable Resistor | 100K ohms |
| VR205 | EVM7JGA30B14 | Variable Resistor | 10K ohms |
| VR206,207 | EVM7JGA30B15 | Variable Resistor | 100K ohms |
| VR208-210 | EVM7JGA30B13 | Variable Resistor | 1K ohms |
| VR301 | EVM7JGA30B23 | Variable Resistor | 2K ohms |
| VR302-304 | EVM7JGA30B15 | Variable Resistor | 100K ohms |
| VR305 | EVM7JGA30B14 | Variable Resistor | 10K ohms |
| VR306,307 | EVM7JGA30B15 | Variable Resistor | 100K ohms |
| VR308-310 | EVM7JGA30B13 | Variable Resistor | 1K ohms |
| VR311 | EVM7JGA30B24 | Variable Resistor | 20K ohms |
| C1 | ECEV1HN010SR | Electrolytic | 1 μF 50V |
| C3 | YW5CH151J5VB | Ceramic | 150 pF |
| C7 | YW5X103K2VB | Ceramic | 0.01 μF |
| C8,9 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C10 | ECEV1CV470 | Electrolytic | 47 μF 16V |
| C11 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C12 | ECEV0JV101 | Electrolytic | 100 μF 6.3V |
| C13 | SK21C336KRD0 | Electrolytic | 33 μF 16V |
| C14 | ECEV0JV101 | Electrolytic | 100 μF 6.3V |
| C15 | SK21A476KRD0 | Electrolytic | 47 μF 10V |
| C16 | ECEV1CV100 | Electrolytic | 10 μF 16V |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C17 | YW5CH101J5VB | Ceramic | 100 pF |
| C18 | YW5X103K2VB | Ceramic | 0.01 μF |
| C19 | YWSK1C105KRA | Electrolytic | 1 μF 16V |
| C20 | YW5X103K2VB | Ceramic | 0.01 μF |
| C21-24 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C25-30 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C31 | SK31A106KRB | Electrolytic | 10 μF 10V |
| C101 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C102 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C103 | YW5CH150J5VB | Ceramic | 15 pF |
| C104 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C105 | YW5CH030D5VB | Ceramic | 3 pF |
| C107 | YW5CH020D5VB | Ceramic | 2 pF |
| C108 | ECEV1CN100 | Electrolytic | 10 μF 16V |
| C109,110 | ECEV1HN010SR | Electrolytic | 10 μF 50V |
| C111,114 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C115 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C116 | YW5CH471J5VB | Ceramic | 470 pF |
| C117 | YW5CH030D5VB | Ceramic | 3 pF |
| C118 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C119 | ECEV0GV101S | Electrolytic | 100 μF 4V |
| C120 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C124 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C125 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C126,127 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C128 | YW5X103K2VB | Ceramic | 0.01 μF |
| C130,132 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C133-135 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C136 | SK21D106KRC | Electrolytic | 10 μF 16V |
| C137 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C140 | YW5CH270J5VB | Ceramic | 27 pF |
| C141 | YW5X103K2VB | Ceramic | 0.01 μF |
| C143 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C144 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C145 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C146,147 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C148 | YW5CH050D5VB | Ceramic | 5 pF |
| C149 | ECEV1CV470 | Electrolytic | 47 μF 16V |
| C201 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C202 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C203 | YW5CH150J5VB | Ceramic | 15 pF |
| C204 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C207 | YW5CH050D5VB | Ceramic | 5 pF |
| C208 | ECEV1CN100 | Electrolytic | 10 μF 16V |
| C209,210 | ECEV1HN010SR | Electrolytic | 1 μF 50V |
| C211,214 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C215 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C216 | YW5CH471J5VB | Ceramic | 470 pF |
| C217 | YW5CH030D5VB | Ceramic | 3 pF |
| C218 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C219 | ECEV0GV101S | Electrolytic | 100 μF 4V |
| C220 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C224 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C225 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C226,227 | ECEV1CV100 | Electrolytic | 10 μF 16V |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C228 | YW5X103K2VB | Ceramic | 0.01 μF |
| C230,232 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C233-235 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C236 | SK21D106KRC | Electrolytic | 10 μF 16V |
| C237 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C240 | YW5CH270J5VB | Ceramic | 27 pF |
| C241 | YW5X103K2VB | Ceramic | 0.01 μF |
| C243 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C244 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C245 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C246,247 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C248 | YW5CH050D5VB | Ceramic | 5 pF |
| C249 | ECEV1CV470 | Electrolytic | 47 μF 16V |
| C301 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C302 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C303 | YW5CH150J5VB | Ceramic | 15 pF |
| C304 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C305 | YW5CH030D5VB | Ceramic | 3 pF |
| C307 | YW5CH020D5VB | Ceramic | 2 pF |
| C308 | ECEV1CN100 | Electrolytic | 10 μF 16V |
| C309,310 | ECEV1HN010SR | Electrolytic | 1 μF 50V |
| C311,314 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C315 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C316 | YW5CH471J5VB | Ceramic | 470 pF |
| C317 | YW5CH030D5VB | Ceramic | 3 pF |
| C318 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C319 | ECEV0GV101S | Electrolytic | 100 μF 4V |
| C320 | YWSK1C106KRC | Electrolytic | 10 μF 16V |
| C324 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C325 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C326,327 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C328 | YW5X103K2VB | Ceramic | 0.01 μF |
| C330,332 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C333-335 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C336 | SK21D106KRC | Electrolytic | 10 μF 16V |
| C337 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C340 | YW5CH270J5VB | Ceramic | 27 pF |
| C341 | YW5X103K2VB | Ceramic | 0.01 μF |
| C343 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C344 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C345 | ECEV1CV100 | Electrolytic | 10 μF 16V |
| C346,347 | YW5F104Z2VB | Ceramic | 0.1 μF |
| C348 | YW5CH050D5VB | Ceramic | 5 pF |
| C349 | ECEV1CV470 | Electrolytic | 47 μF 16V |
| CN1-3 | YW51756394 | Connector | |
| TP1,101 | YWRCT2125TPV | Test- Pin | |
| TP102-106 | YWRCT2125TPV | Test- Pin | |
| TP201-206 | YWRCT2125TPV | Test- Pin | |
| TP301-306 | YWRCT2125TPV | Test- Pin | |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| | **MOTHER BOARD** | | |
| PCB9 (RTL) | YWVKBE550P2A | Printed Circuit Board Assy | |
| IC1 | YWUPD4051BG | IC | |
| IC2 | NJM2902M | IC | |
| IC3,4 | YWUPD4066BG | IC | |
| IC5,6 | YWTC4S66FR | IC | |
| IC7 | NJM2904M | IC | |
| IC8 | YWNJM2902N | IC | |
| IC9 | MC74HC4040F | IC | |
| IC10 | YWMC74HC10F | IC | |
| IC11 | YWMC74HC74AF | IC | |
| Q1 | 2SD1819-QRS | Transistor | |
| Q2 | 2SB1218A-QR | Transistor | |
| Q3-12 | 2SD1819-QRS | Transistor | |
| Q16 | 2SB1218A-QR | Transistor | |
| Q17,18 | 2SD1819-QRS | Transistor | |
| Q19 | 2SB1218A-QR | Transistor | |
| Q20 | 2SD874A-RS | Transistor | |
| Q21 | 2SB1218A-QR | Transistor | |
| Q22 | 2SB766A-QR | Transistor | |
| Q23 | 2SD1819-QRS | Transistor | |
| Q24 | 2SB766A-QR | Transistor | |
| Q25 | 2SD1819-QRS | Transistor | |
| Q26 | 2SB766A-QR | Transistor | |
| Q27 | 2SD1819-QRS | Transistor | |
| Q28 | 2SD1979 | Transistor | |
| Q29 | 2SB1218A-QR | Transistor | |
| D1 | MA5082 | Diode | |
| D2 | MA143 | Diode | |
| D6 | MA159 | Diode | |
| R1-4 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R5 | ERJ3GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R6 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R8 | YWR0816P622D | Metal | 6.2K ohms 1/16W |
| R9 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R10 | YWR0816P562D | Metal | 5.6K ohms 1/16W |
| R11 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R12 | YWR0816P183D | Metal | 18K ohms 1/16W |
| R13 | YWR0816P432D | Metal | 4.3K ohms 1/16W |
| R14 | YWR0816R363D | Metal | 36K ohms 1/16W |
| R15 | YWR0816P153D | Metal | 15K ohms 1/16W |
| R16 | YWR0816P183D | Metal | 18K ohms 1/16W |
| R17 | YWR0816R363D | Metal | 36K ohms 1/16W |
| R18-21 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R22-29 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R30-33 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R34 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R35 | ERJ3GEYJ622 | Carbon | 6.2K ohms 1/16W |
| R36 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R37 | ERJ3GEYJ622 | Carbon | 6.2K ohms 1/16W |
| R38-43 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R44 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R45-56 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R62-64 | ERJ3GEYJ105 | Carbon | 1M ohms 1/16W |
| R65,66 | ERJ3GEYJ150 | Carbon | 15 ohms 1/16W |
| R67 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R68 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R69 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R70,71 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |
| R72 | YWR0816P183D | Metal | 18K ohms 1/16W |
| R73 | YWR0816R334D | Metal | 330K ohms 1/16W |
| R74 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R75 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R76 | YWR0816R124D | Metal | 120K ohms 1/16W |
| R77 | YWR0816P303D | Metal | 30K ohms 1/16W |
| R78 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R79 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R80 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R81 | YWR0816P303D | Metal | 30K ohms 1/16W |
| R86 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R87 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R88 | YWR0816P302D | Metal | 3K ohms 1/16W |
| R89 | YWR0816P183D | Metal | 18K ohms 1/16W |
| R90 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R91 | YWR0816P303D | Metal | 30K ohms 1/16W |
| R96 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R97 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R98 | YWR0816P203D | Metal | 20K ohms 1/16W |
| R99 | YWR0816R683D | Metal | 68K ohms 1/16W |
| R100 | YWR0816P223D | Metal | 22K ohms 1/16W |
| R101 | YWR0816R683D | Metal | 68K ohms 1/16W |
| C1 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C2 | YW5CH101J5VB | Ceramic | 100 pF |
| C3 | YWSK1C106KRC | Electrolytic | 10 µF 16V |
| C4-6 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C7 | ECEV1CV470 | Electrolytic | 47 µF 16V |
| C8-10 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C11 | ECEV1EV330 | Electrolytic | 33 µF 25V |
| C12 | ECEV1CV470 | Electrolytic | 47 µF 16V |
| C16-18 | ECEV1HV3R3SR | Electrolytic | 3.3 µF 50V |
| C19 | YW5X103K2VB | Ceramic | 0.01 µF |
| C20 | YW5X102K5VB | Ceramic | 1000 pF |
| C21,22 | ECEV1EV330 | Electrolytic | 33 µF 25V |
| C23 | ECEV1VG330 | Electrolytic | 33 µF 35V |
| C24,25 | ECEV1EV330 | Electrolytic | 33 µF 25V |
| C26,27 | ECEV0JV101 | Electrolytic | 100 µF 6.3V |
| C28 | ECEV0JV220 | Electrolytic | 22 µF 6.3V |
| C29 | ECEV0JV101 | Electrolytic | 100 µF 6.3V |
| C30 | ECEV1CV470 | Electrolytic | 47 µF 16V |
| C31 | ECEV1CV100 | Electrolytic | 10 µF 16V |
| C32 | ECEV1CV470 | Electrolytic | 47 µF 16V |
| C33 | SK21C336KRD0 | Electrolytic | 33 µF 16V |
| C34 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C40-42 | NFM41R10C102 | Bead | |
| C43 | YW5F104Z2VB | Ceramic | 0.1 µF |
| C44 | YWSK1C106KRC | Electrolytic | 10 µF 16V |
| CN2-6 | YW51756434 | 24-pin Connector | |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| CN11-18 | YW51756434 | 24-pin Connector |
| CN19-21 | YW51756394 | 24-pin Connector |
| CN22 | YW51756434 | 24-pin Connector |
| CN23 | YW41756432 | 12-pin Connector |
| CN24 | YW51756434 | 24-pin Connector |
| CN25 | YW41756432 | 12-pin Connector |

## ACCESSORY PARTS/PACKAGING PARTS

| | | |
|---|---|---|
| CN100 | YWHR10A7P4S | 4-pin Connector |
| M31 | YWV8QA3257AN | Operating Instructions |
| M32 | XZB26X40C05 | Polyethylene Bag |
| M35 | YWV9CF2203AN | Packaging Ass'y |

## EXTENTION BOARD
## (REFER TO PAGE 38)

| | | |
|---|---|---|
| EXB01 | YWV0EA0287AN | 12P-24P Extention Board |
| EXB02 | YWV0EA0288AN | 24PX2 Extention Board |
| EXB03 | YWV0EA0289AN | 24P-X3 Extention Board |
| EXB04 | YWV0EA0290AN | Sensor/drive Extention Board |
| EXB05 | YWV0EA0291AN | Sensor/Pre AMP Extention Board |
| EXB06 | YWV0EA0292AN | Mother/Rear Extention Board |
| EXB07 | YWV0EA0293AN | Encord/Sync Extention Board |
| EXB08 | YWV0EA0294AN | Syscon Extention Board |
| EXB09 | YWV0EA0295AN | Dita Extention Board |

## CAMERA ADAPTOR WV-PS550

### MISCELLANEOUS

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| Q101 | 2SC3944-RS | Transistor |
| CN101 | YWNP5D2V | S-Video Connector |
| CN102 | YWNR | Connector |
| M1 | YWV5WA1593A3 | Front Panel |
| M2 | YWV2KA0887A2 | Front Chassis |
| M3 | YWV2KA0889B1 | Main Chassis |
| M4 | YWV2SA2655A4 | Mounting Angle |
| M5 | YWV2KA0859A2 | Side Chassis |
| M6 | YWCS1 | Cord Clamp |
| M7 | YWV2SA2656A4 | Mounting Angle |
| M8 | YWV2PA0619A4 | Insulator |
| M9 | YWV5EA1343B2 | Upper Cover |
| M10 | YWV5EB1306B2 | Bottom Cover |
| M11 | YWV5350WB01 | Rubber Foot |
| M12 | YWV5WA1594A2 | Rear Panel |
| M13 | YWV2SA2654A4 | Mounting Angle |
| M14 | UAMS-05SV0 | Cord Clamp |
| M15 | YWV2SA2657A4 | Mounting Angle for Left Side |
| M16 | YWV2SA2658A4 | Mounting Angle for Right Side |
| M17 | YWV2PA0618A4 | Insulator |
| M18 | YWV2SA2653A4 | Mounting Angle |
| M19 | YWA1GA0001A4 | Plasty-Rivet |
| M21 ⚠ | YWV7QA3239A4 | Main Label |
| M22 | YWV7SA1838A4 | Screw Caution Label |
| M25 | YWV7MA0338A4 | Caution Label |
| M26 | YFV7MB0099A4 | UL Caution Label |

## AUDIO MOTHER BOARD

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| PCB1 (RTL) | YWVKBPS55P1A | Printed Circuit Board Assy |
| CN2 | YW41768338 | 14-pin Connector |

## AUDIO CONNECTOR BOARD

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| PCB2 (RTL) | YWVKCPS55P1A | Printed Circuit Board Assy |
| SW1 | YWSSSF042P6N | Slide Switch |
| CN2 | YW530140310 | 3-pin Connector |
| JK3 | YWT6525AABB | Jack |
| M28 | YWA2HA0197A4 | Shield |

## AUDIO BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB3 (RTL) | YWVKDPS55P1A | Printed Circuit Board Assy | |
| IC1 | YWUPC4570G | IC | |
| IC2 | NJM4560M | IC | |
| IC3 | YW78L09UATE1 | IC | |
| IC4 | YWTA7303P | IC | |
| IC5 | NJM4556MB | IC | |
| IC6 | NJM2903M | IC | |
| IC7 | YW78L09UATE1 | IC | |
| Q1,2 | 2SD1819-QRS | Transistor | |
| Q3-5 | 2SC3931-CD | Transistor | |
| Q6 | 2SB1219-QRS | Transistor | |
| Q7,8 | 2SD1819-QRS | Transistor | |
| Q9 | 2SC3938-QRS | Transistor | |
| Q10 | 2SB1218-QRS | Transistor | |
| Q12 | 2SK662-PQR | FET | |
| Q13 | 2SD1819-QRS | Transistor | |
| D1 | MA141K | Diode | |
| D2,3 | YWRD2R0ESB1 | Diode | |
| D4 | MA338 | Diode | |
| D5 | MA182 | Diode | |
| D6,7 | MA141K | Diode | |
| R1 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R2 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R3 | YWR0816P103D | Metal | 10K ohms 1/16W |
| R4 | ERJ3GEYJ392 | Carbon | 3.9K ohms 1/16W |
| R5 | ERJ3GEYJ334 | Carbon | 330K ohms 1/16W |
| R6 | YWR0816P273D | Metal | 27K ohms 1/16W |
| R7 | YF2116751JT | Carbon | 750 ohms 1/10W |
| R8 | ERJ3GEYJ471 | Carbon | 470 ohms 1/16W |
| R9 | ERJ3GEYJ822 | Carbon | 8.2K ohms 1/16W |
| R10 | ERJ3GEYJ163 | Carbon | 16K ohms 1/16W |
| R11 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R12 | ERJ6GEY0R00 | Carbon | 1 ohms 1/10W |
| R13 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R14 | ERJ3GEYJ123 | Carbon | 12K ohms 1/16W |
| R15 | ERJ3GEYJ153 | Carbon | 15K ohms 1/16W |
| R16 | YWR0816P113D | Metal | 11K ohms 1/16W |
| R17 | YWR0816P133D | Metal | 13K ohms 1/16W |
| R18 | ERJ3GEYJ563 | Carbon | 56K ohms 1/16W |
| R19 | ERJ3GEYJ473 | Carbon | 47K ohms 1/16W |
| R20 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R21 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R22 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R23 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R24,25 | ERJ3GEYJ331 | Carbon | 330 ohms 1/16W |
| R26,27 | ERJ3GEYJ333 | Carbon | 33K ohms 1/16W |
| R28 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R29 | ERJ3GEYJ100 | Carbon | 10 ohms 1/16W |
| R30 | ERJ3GEYJ222 | Carbon | 2.2K ohms 1/16W |
| R31 | ERJ3GEYJ102 | Carbon | 1K ohms 1/16W |
| R32 | ERJ3GEYJ104 | Carbon | 100K ohms 1/16W |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| R33,34 | ERJ3GEYJ223 | Carbon 22K ohms 1/16W |
| R35 | ERJ3GEYJ562 | Carbon 5.6K ohms 1/16W |
| R36 | ERJ3GEYJ123 | Carbon 12K ohms 1/16W |
| R37 | ERJ3GEYJ103 | Carbon 10K ohms 1/16W |
| R38 | ERJ3GEYJ102 | Carbon 1K ohms 1/16W |
| R39 | ERJ3GEYJ331 | Carbon 330 ohms 1/16W |
| R40 | ERJ3GEYJ101 | Carbon 100 ohms 1/16W |
| R41 | ERJ3GEYJ331 | Carbon 330 ohms 1/16W |
| R43 | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W |
| R44,45 | ERJ3GEYJ752 | Carbon 7.5K ohms 1/16W |
| R50 | ERJ3GEYJ682 | Carbon 6.8K ohms 1/16W |
| R51,52 | ERJ3GEYJ103 | Carbon 10K ohms 1/16W |
| R53 | ERJ3GEYJ182 | Carbon 1.8K ohms 1/16W |
| R54 | ERJ3GEYJ683 | Carbon 68K ohms 1/16W |
| R55 | ERJ3GEYJ103 | Carbon 10K ohms 1/16W |
| R56 | ERJ3GEYJ221 | Carbon 220 ohms 1/16W |
| R57 | ERJ3GEYJ473 | Carbon 47K ohms 1/16W |
| R58 | ERJ3GEYJ683 | Carbon 68K ohms 1/16W |
| R59 | ERJ3GEYJ104 | Carbon 100K ohms 1/16W |
| R60 | ERJ3GEYJ223 | Carbon 22K ohms 1/16W |
| R61 | ERJ3GEYJ103 | Carbon 10K ohms 1/16W |
| R62 | ERJ3GEYJ105 | Carbon 1M ohms 1/16W |
| R63 | YWR0816P822D | Metal 8.2K ohms 1/16W |
| R64 | ERJ3GEYJ391 | Carbon 390 ohms 1/16W |
| R65 | ERJ3GEYJ105 | Carbon 1M ohms 1/16W |
| R66 | ERJ3GEYJ102 | Carbon 1K ohms 1/16W |
| R67,68 | ERJ3GEYJ104 | Carbon 100K ohms 1/16W |
| R69 | ERJ3GEY0R00 | Carbon 0 ohms 1/16W |
| R70-74 | ERJ6GEY0R00 | Carbon 0 ohms 1/10W |
| VR1 | EVML3GA00B23 | Variable Resistor 2 K ohms |
| C1 | ECEA1CKA100 | Electrolytic 10 μF 16V |
| C2 | ECEA1AKS470 | Electrolytic 47 μF 10V |
| C3 | ECEA1CKN100 | Electrolytic 10 μF 16V |
| C4 | ECEA1AKS470 | Electrolytic 47 μF 10V |
| C5 | YW5X102K5VB | Ceramic 1000 pF |
| C6 | ECEA1CKN100 | Electrolytic 10 μF 16V |
| C7 | YW5CH330J5VB | Ceramic 33 pF |
| C8 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| C9,10 | ECEA1CKN100 | Electrolytic 10 μF 16V |
| C11 | ECEA1AKA220 | Electrolytic 22μF 10V |
| C12 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| C13 | YW5X472K5VB | Ceramic 4700 pF |
| C14,15 | YW5CH101J5VB | Ceramic 100 pF |
| C16 | YF400104FZT | Ceramic 0.1 μF |
| C17 | YW5CH120J5VB | Ceramic 12 pF |
| C18 | YW5X102K5VB | Ceramic 1000 pF |
| C19 | YW5CH101J5VB | Ceramic 100 pF |
| C20 | YW400560THJ | Ceramic 56 pF |
| C21 | YF400104FZT | Ceramic 0.1 μF |
| C22,23 | YW5X102K5VB | Ceramic 1000 pF |
| C24 | YF400104FZT | Ceramic 0.1 μF |
| C25 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| C26 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| C27,28 | YW5CH200J5VB | Ceramic 20 pF |
| C29 | ECEA1CKS470 | Electrolytic 47 μF 16V |

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| C30 | YF400104FZT | Ceramic 0.1 μF |
| C31 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| C32,33 | YF400104FZT | Ceramic 0.1 μF |
| C34 | YW5CH050D5VB | Ceramic 5 pF |
| C35 | YW5X682K2VB | Ceramic 6800 pF |
| C36 | YW5X182K2VB | Ceramic 1800 pF |
| C37 | YW5X272K5VB | Ceramic 2700 pF |
| C38 | YF400104FZT | Ceramic 0.1 μF |
| C39 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| C40 | ECEA1AKN470 | Electrolytic 47 μF 10V |
| C42 | ECEA1AKA220 | Electrolytic 22 μF 10V |
| C43 | YW5CH101J5VB | Ceramic 100 pF |
| C44 | YW5CH100J5VB | Ceramic 10 pF |
| C45 | ECEA1AKS470 | Electrolytic 47 μF 10V |
| C46 | ECEA1HKA2R2 | Electrolytic 2.2 μF 50V |
| C47 | ECEA1HKAR47 | Electrolytic 0.47 μF 50V |
| C48 | YW5X103K2VB | Ceramic 0.01 μF |
| C49 | YF400104FZT | Ceramic 0.1 μF |
| C50 | ECSF1VE685 | Tantalum 6.8 μF 35V |
| C51 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| C52 | YF400104FZT | Ceramic 0.1 μF |
| C53 | ECEA1CKS470 | Electrolytic 47 μF 16V |
| L1 | YWS100522391 | Coil 390 μH |
| L2 | YWTLC1441Z | Coil |
| L3 | YWTLC1217Z | Coil |
| SW1,2 | YWSSSS812B12 | Slide Switch |
| CF1 | YWE112S | Ceramic Filter |
| CF2-4 | YWE117S | Ceramic Filter |
| CN1 | YW41756398 | 14-pin Connector |
| TP1-4 | YW32BM7R5 | Test- Pin |
| M31 | YWV2HA1118A4 | Shield Parts |
| M32 | YWV2HA1119A4 | Shield Parts |
| M33 | YWV2HA1120A4 | Shield Parts |
| M34 | YWV2HA1121A4 | Shield Parts |

## INTERFACE BOARD

| | | |
|---|---|---|
| PCB4 (RTL) | YWVKEPS55P1A | Printed Circuit Board Assy |
| L1,2 | YWBL01RN1A62 | Coil |
| CN1 | YWPCRE36MD | 36-pin Connector |
| CN2 | YWPCRE28MD | 28-pin Connector |

## LED BOARD

| | | |
|---|---|---|
| PCB5 (RTL) | YWVKFPS55P1A | Printed Circuit Board Assy |
| D1 | LN277RPX | LED |
| M36 | YWA2NC0257A4 | Spacer |

## MOTHER BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB6 (RTL) | YWVKYPS55P1A | Printed Circuit Board Assy | |
| IC1 | YWMC145407F | IC | |
| IC2 | NJM2903M | IC | |
| D1 | MA157 | Diode | |
| R1 | ERDS2TJ910 | Carbon | 91 ohms 1/4W |
| R2 | ERJ3GEYJ750 | Carbon | 75 ohms 1/16W |
| R3 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| R4 | ERJ3GEYJ223 | Carbon | 22K ohms 1/16W |
| R5 | ERJ3GEYJ682 | Carbon | 6.8K ohms 1/16W |
| R6 | ERJ3GEYJ103 | Carbon | 10K ohms 1/16W |
| R7 | ERJ3GEYJ101 | Carbon | 100 ohms 1/16W |
| C1 | ECA1EFZ181 | Electrolytic | 180 µF 25V |
| C2 | ECEA1CKS470 | Electrolytic | 47 µF 16V |
| C3-6 | ECEA1CKA100 | Electrolytic | 10 µF 16V |
| C8 | ECEA1CKA220 | Electrolytic | 22 µF 16V |
| C9 | YW5F104Z2VB | Ceramic | 0.1 µF |
| CN1 | YW530141410 | 14-pin Connector | |
| CN2,3 | FCN214J050GA | 50-pin Connector | |
| CN4,5 | YW530140410 | 4-pin Connector | |
| CN6 | YW530140810 | 8-pin Connector | |
| CN7 | YW530140310 | 3-pin Connector | |
| CN8 | YW530140810 | 8-pin Connector | |
| F1 | YWSSFR4AF002 | Current Fuse | 0.4A |

## DEMODULATOR BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB7 (RTL) | YWVKZADP7E2A | Printed Circuit Board Assy | |
| IC1 | NJM592M8 | IC | |
| IC2 | TL092CPS | IC | |
| IC3 | YWLM1881M | IC | |
| IC4 | YWCX20095A | IC | |
| IC5 | NJM592M8 | IC | |
| IC6 | NJM4556M | IC | |
| IC7 | TL092CPS | IC | |
| IC8 | NJM2903M | IC | |
| IC9 | UPD74HC4050G | IC | |
| IC10 | YWTC4S66FR | IC | |
| IC11 | YWUPD4538BG | IC | |
| IC12 | YWUPD4053BG | IC | |
| IC13 | YWUPC4062G2 | IC | |
| IC14 | YWUPD4053BG | IC | |
| IC15 | YWTC4S69F | IC | |
| IC16 | YWTC4S66FR | IC | |
| Q1 | 2SC2404-CD | Transistor | |
| Q2 | 2SK198-Q | Transistor | |
| Q3-5 | 2SC2404-CD | Transistor | |
| Q6,7 | 2SA1022-C | Transistor | |
| Q8,9 | 2SD601-RS | Transistor | |
| Q10 | 2SA1022-C | Transistor | |
| Q11 | 2SC2404-CD | Transistor | |
| Q12 | 2SD601-RS | Transistor | |
| Q13 | 2SC2404-CD | Transistor | |
| Q14-16 | 2SD601-RS | Transistor | |
| Q17 | 2SB709-RS | Transistor | |
| Q18-21 | 2SC2404-CD | Transistor | |
| Q23,24 | 2SC2404-CD | Transistor | |
| Q25 | 2SK198-Q | Transistor | |
| Q26-28 | 2SC2404-CD | Transistor | |
| Q29,30 | 2SA1022-C | Transistor | |
| Q31 | 2SC2404-CD | Transistor | |
| Q32 | 2SD601-RS | Transistor | |
| Q33 | 2SA1022-C | Transistor | |
| Q34,35 | 2SD601-RS | Transistor | |
| Q36 | 2SC2404-CD | Transistor | |
| Q37,38 | 2SD601-RS | Transistor | |
| Q39 | 2SK198-Q | Transistor | |
| Q40 | 2SB793-RS | Transistor | |
| Q41 | 2SD601-RS | Transistor | |
| Q42 | 2SB793-RS | Transistor | |
| Q43-45 | 2SD601-RS | Transistor | |
| Q46 | 2SB793-RS | Transistor | |
| Q47 | 2SD601-RS | Transistor | |
| Q48 | 2SB793-RS | Transistor | |
| D1 | MA165 | Diode | |
| D2 | MA151K | Diode | |
| R1 | YF2116333GT | Carbon | 33K ohms 1/10W |
| R2 | YF2116683GT | Carbon | 68K ohms 1/10W |
| R3 | YF2116681JT | Carbon | 680 ohms 1/10W |
| R4 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R5 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R6 | YF2116560JT | Carbon | 56 ohms 1/10W |
| R7 | YF2116153JT | Carbon | 15K ohms 1/10W |
| R8 | YF2116123JT | Carbon | 12K ohms 1/10W |
| R9 | YF2116470JT | Carbon | 47 ohms 1/10W |
| R10 | YF2116470JT | Carbon | 47 ohms 1/10W |
| R11 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R12 | YF2116102JT | Carbon | 1K ohms 1/10W |
| R13 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R14 | YF2116333GT | Carbon | 33K ohms 1/10W |
| R15 | YF2116473GT | Carbon | 47K ohms 1/10W |
| R16 | YF2116203JT | Carbon | 20K ohms 1/10W |
| R17 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R18 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R19 | YF2116683GT | Carbon | 68K ohms 1/10W |
| R20 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R21 | YF2116821GT | Carbon | 820 ohms 1/10W |
| R22 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R23 | YF2116821GT | Carbon | 820 ohms 1/10W |
| R24 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R25 | YF2116391JT | Carbon | 390 ohms 1/10W |
| R26 | YF2116332JT | Carbon | 3.3K ohms 1/10W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R27 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R28,29 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R30 | YF2116473GT | Carbon | 47K ohms 1/10W |
| R31 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R32 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R33 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R34,35 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R38 | YF2116273GT | Carbon | 27K ohms 1/10W |
| R39 | YF2116683GT | Carbon | 68K ohms 1/10W |
| R40 | YF2116822JT | Carbon | 8.2K ohms 1/10W |
| R41 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R42 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R43,44 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R45 | YF2116181JT | Carbon | 180 ohms 1/10W |
| R46 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R47 | YF2116122JT | Carbon | 1.2K ohms 1/10W |
| R48 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R49 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R50,51 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R52-55 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R66 | YF2116473GT | Carbon | 47K ohms 1/10W |
| R67 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R68 | YF2116272JT | Carbon | 2.7K ohms 1/10W |
| R69 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R70 | YF2116681JT | Carbon | 680 ohms 1/10W |
| R71 | YF2116684JT | Carbon | 680K ohms 1/10W |
| R72,73 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R74,75 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R76 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R77 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R78 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R79 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R80 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R81 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R82,83 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R86 | YF2116563JT | Carbon | 56K ohms 1/10W |
| R87 | YF2116333GT | Carbon | 33K ohms 1/10W |
| R88 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R89,90 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R91 | YF2116471JT | Carbon | 470 ohms 1/10W |
| R92 | YF2116333GT | Carbon | 33K ohms 1/10W |
| R93 | YF2116473GT | Carbon | 47K ohms 1/10W |
| R94 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R95 | YF2116510JT | Carbon | 51 ohms 1/10W |
| R96 | YF2116153JT | Carbon | 15K ohms 1/10W |
| R97 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R98,99 | YF2116470JT | Carbon | 47 ohms 1/10W |
| R100 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R101 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R102 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R103 | YF2116563GT | Carbon | 56K ohms 1/10W |
| R104 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R105 | YF2116333GT | Carbon | 33K ohms 1/10W |
| R106 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R107,108 | YF2116683GT | Carbon | 68K ohms 1/10W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R109 | YF2116821GT | Carbon | 820 ohms 1/10W |
| R110,111 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R112 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R113 | YF2116911JT | Carbon | 910 ohms 1/10W |
| R114 | YW2116242JT | Carbon | 2.4K ohms 1/10W |
| R115 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R116 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R117 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R118 | YF2116391JT | Carbon | 390 ohms 1/10W |
| R119 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R120 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R121 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R122 | YF2116473GT | Carbon | 47K ohms 1/10W |
| R123 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R124 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R125 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R126 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R127,128 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R129 | YF2116822JT | Carbon | 8.2K ohms 1/10W |
| R130 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R131 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R132 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R133 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R134 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R135,136 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R137 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R138 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R139 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R140 | YF2116183GT | Carbon | 18K ohms 1/10W |
| R141 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R142,143 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R144 | YF2116162JT | Carbon | 1.6K ohms 1/10W |
| R145 | YF2116563JT | Carbon | 56K ohms 1/10W |
| R146 | YW2116182JT | Carbon | 1.8K ohms 1/10W |
| R147 | YF2116514GT | Carbon | 510K ohms 1/10W |
| R148 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R149 | YF2116272JT | Carbon | 2.7K ohms 1/10W |
| R150 | YF2116474JT | Carbon | 470K ohms 1/10W |
| R151 | YF2116112JT | Carbon | 1.1K ohms 1/10W |
| R152,153 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R155 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R156 | YF2116563JT | Carbon | 56K ohms 1/10W |
| R157 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R158 | YF2116474JT | Carbon | 470K ohms 1/10W |
| R159 | YWR1220P473D | Metal | 47K ohms |
| R160 | YWR1220P153D | Metal | 15K ohms |
| R161 | R1220P133D | Metal | 13K ohms |
| R162 | YWR1220P393D | Metal | 39K ohms |
| R163 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R164 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R165 | YWR1220P153D | Metal | 15K ohms |
| R166 | YWR1220P473D | Metal | 47K ohms |
| R167 | R1220P133D | Metal | 13K ohms |
| R168 | YWR1220P393D | Metal | 39K ohms |
| R169 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R170 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R172 | YF2116330JT | Carbon | 33 ohms 1/10W |
| R173,174 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R175,176 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R177,178 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R179 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R180 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R181,182 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R183 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R184 | YF2116272JT | Carbon | 2.7K ohms 1/10W |
| R185 | YF2116302GT | Carbon | 3K ohms 1/10W |
| R186 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R187 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R188 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R189 | YF2116561JT | Carbon | 560 ohms 1/10W |
| R190 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| VR1 | EVML3GA00B23 | Variable Resistor | 2K ohms |
| VR2 | EVML3GA00B13 | Variable Resistor | 1K ohms |
| VR3,4 | EVML3GA00B53 | Variable Resistor | 5KB ohms |
| C1 | ECEA1CU101 | Electrolytic | 100 µF 16V |
| C2 | YF400120CHJT | Ceramic | 12 pF |
| C3 | YF400104FZT | Ceramic | 0.1 µF |
| C4 | ECEA1AU470 | Electrolytic | 47 µF 10V |
| C5 | ECSF1CE476 | Tantalum | 47 µF 16V |
| C6 | ECEA1HU0R1 | Electrolytic | 0.1 µF 50V |
| C7 | YF400104FZT | Ceramic | 0.1 µF |
| C8,9 | ECEA1AU470 | Electrolytic | 47 µF 10V |
| C10 | ECSF1CE476 | Tantalum | 47µF 16V |
| C11 | YF400101CHJT | Ceramic | 100 pF |
| C12 | ECEA1AU101 | Electrolytic | 100 µF 10V |
| C13 | ECEA1HU010 | Electrolytic | 1 µF 50V |
| C14 | YF400050CHDT | Ceramic | 5 pF |
| C15 | YF400270CHJT | Ceramic | 27 pF |
| C18 | ECSF1CE476 | Tantalum | 47 µF 16V |
| C19 | ECEA1AKN470 | Electrolytic | 47 µF 10V |
| C20 | YF400220CHJT | Ceramic | 22 pF |
| C21 | ECEA1AU470 | Electrolytic | 47 µF 10V |
| C22 | ECEA1CU101 | Electrolytic | 100 µF 16V |
| C23 | YF400104FZT | Ceramic | 0.1 µF |
| C24 | ECEA1AU330 | Electrolytic | 33 µF 10V |
| C25 | ECEA1CKA100 | Electrolytic | 10 µF 16V |
| C26 | ECEA1HK010 | Electrolytic | 1 µF 50V |
| C27 | YF400104FZT | Ceramic | 0.1 µF |
| C28 | ECEA1HU010 | Electrolytic | 1 µF 50V |
| C29 | ECEA1CU470 | Electrolytic | 47 µF 16V |
| C30 | YF400151CHJT | Ceramic | 150 pF |
| C31 | YF400104FZT | Ceramic | 0.1 µF |
| C32 | ECEA1CU100 | Electrolytic | 10 µF 16V |
| C33,34 | YF400104FZT | Ceramic | 0.1 µF |
| C35 | ECEA1CU470 | Electrolytic | 47 µF 16V |
| C36 | ECEA0JKN470 | Electrolytic | 47 µF 6.3V |
| C37 | YF400221CHJT | Ceramic | 220 pF |
| C38 | ECEA0JKN330 | Electrolytic | 33 µF 6.3V |
| C39 | ECSF1AE476 | Tantalum | 47 µF 10V or |
| | YWS21A476 | Electrolytic | 47 µF 10V |
| C40 | ECEA1AU101 | Electrolytic | 100 µF 10V |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C41 | ECEA1EU4R7 | Electrolytic | 4.7 µF 25V |
| C42 | YWRJ410V222M | Electrolytic | 2200 µF 10V |
| C43 | ECEA1EKA4R7 | Electrolytic | 4.7 µF 25V |
| C46 | ECEA1CU101 | Electrolytic | 100 µF 16V |
| C47 | YF400100CHJT | Ceramic | 10 pF |
| C50,51 | YF400104FZT | Ceramic | 0.1 µF |
| C52 | ECSF1AE476 | Tantalum | 47 µF 10V or |
| | YWS21A476 | Electrolytic | 47 µF 10V |
| C53 | ECSF1CE476 | Tantalum | 47µF 16V |
| C54 | ECSF1AE336 | Tantalum | 33 µF 10V |
| C55 | YF400104FZT | Ceramic | 0.1 µF |
| C56 | ECEA1AU470 | Electrolytic | 47 µF 10V |
| C57 | ECEA1CU470 | Electrolytic | 47µF 16V |
| C58 | YF400101CHJT | Ceramic | 100 pF |
| C59 | ECEA1AU470 | Electrolytic | 47 µF 10V |
| C60 | ECEA1AU101 | Electrolytic | 100 µF 10V |
| C61 | ECEA1HU010 | Electrolytic | 1 µF 50V |
| C62,63 | YF400050CHDT | Ceramic | 5 pF |
| C65 | ECSF1CE476 | Tantalum | 47 µF 16V |
| C66 | ECSF1AE476 | Tantalum | 47 µF 10V or |
| | YWS21A476 | Electrolytic | 47 µF 10V |
| C67 | ECEA1CU101 | Electrolytic | 100 µF 16V |
| C68 | ECEA1AU470 | Electrolytic | 47 µF 10V |
| C69 | ECEA1CU100 | Electrolytic | 10 µF 16V |
| C70 | ECSF1CE106 | Tantalum | 10 µF 16V |
| C71 | ECQM1H104JZ | Plastic | 0.1 µF 50V |
| C72 | ECSF1AE225 | Tantalum | 2.2 µF 10V |
| C73 | ECSF1CE476 | Tantalum | 47 µF 16V |
| C74 | YF400104FZT | Ceramic | 0.1 µF |
| C75 | ECEA1VSN2R2 | Electrolytic | 2.2 µF 35V |
| C76 | YF400104FZT | Ceramic | 0.1 µF |
| C77 | ECSF1CE106 | Tantalum | 10 µF 16V |
| C78 | ECSF1CE476 | Tantalum | 47 µF 16V |
| C79 | YF400103XKT | Ceramic | 0.01 µF |
| C80 | ECEA1AU470 | Electrolytic | 47 µF 10V |
| C81 | ECSF1CE476 | Tantalum | 47 µF 16V |
| C82 | ECSF1AE476 | Tantalum | 47 µF 10V or |
| | YWS21A476 | Electrolytic | 47 µF 10V |
| C83 | YF400101CHJT | Ceramic | 100 pF |
| C84 | YF400104FZT | Ceramic | 0.1 µF |
| C85 | ECEA1CKA100 | Electrolytic | 10 µF 16V |
| C86 | ECEA1CU101 | Electrolytic | 100 µF 16V |
| C87 | ECEA1AKA220 | Electrolytic | 22 µF 10V |
| C88 | ECEA1AU101 | Electrolytic | 100 µF 10V |
| C89 | YF400224FZT | Ceramic | 0.22 µF |
| C90 | ECEA0JU101 | Electrolytic | 100 µF 6.3V |
| C91 | YF400103XKT | Ceramic | 0.01 µF |
| CT1 | YWCDY40AS | Trimmer Capacitor | |
| CT2 | YWCDX20APS | Trimmer Capacitor | |
| L7,8 | ELJFA470KF | Coil | 47 µH |
| L18,19 | ELJFA100KF | Coil | 10 µH |
| CF1 | ELB4B538 | Filter | |
| CF2 | ELKTH101GA | Filter | |
| CF3,4 | YWT7K26MBPF | Filter | |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| CF5,6 | YWYS30545 | Filter | |
| CF7 | YWYS30549 | Filter | |
| CF8 | YWYS30546 | Filter | |
| CN1 | FCN215Q050GA | 50-pin Connector | |
| TP1-10 | YW32BM5A | Test- Pin | |
| M38 | YWV2HA0977A3 | Shield Cover | |
| M39 | YWV2HA0978C2 | Shield Case | |

## MODULATOR BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB8 (RTL) | YWVKZAD7AE3A | Printed Circuit Board Assy | |
| IC1 | YWUPC4062G2 | IC | |
| IC2 | YWLM1881M | IC | |
| IC3 | YWTC4S69F | IC | |
| IC4 | YWTC4S66FR | IC | |
| IC5 | TLC272CPS | IC | |
| IC6 | YWSN16913P | IC | |
| IC7 | YWTC4S66FR | IC | |
| IC8 | YWTC7S08F | IC | |
| IC9 | UPD74HC390G | IC | |
| IC10 | YWUPD4538BG | IC | |
| IC11 | YWUPD74HC08G | IC | |
| IC12 | NJM1496M | IC | |
| IC13,14 | UPD74HC221AG | IC | |
| Q1-3 | 2SC2404-CD | Transistor | |
| Q4 | 2SD601-RS | Transistor | |
| Q5-9 | 2SC2404-CD | Transistor | |
| Q10 | 2SA1022-CD | Transistor | |
| Q11,12 | 2SC2404-CD | Transistor | |
| Q13 | 2SA1022-CD | Transistor | |
| Q14 | 2SB793-RS | Transistor | |
| Q15,16 | 2SD601-RS | Transistor | |
| Q17,18 | 2SB793-RS | Transistor | |
| Q19,20 | 2SD601-RS | Transistor | |
| Q21 | 2SA1022-CD | Transistor | |
| Q22,23 | 2SC2404-CD | Transistor | |
| Q24 | 2SB793-RS | Transistor | |
| Q25 | 2SD601-RS | Transistor | |
| Q26 | 2SB793-RS | Transistor | |
| Q27,28 | 2SD601-RS | Transistor | |
| Q29 | 2SB709-RS | Transistor | |
| Q30 | 2SD601-RS | Transistor | |
| D1 | MA151WA | Diode | |
| R2 | YF2116113JT | Carbon | 11K ohms 1/10W |
| R3 | YF2116822JT | Carbon | 8.2K ohms 1/10W |
| R4 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R5 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R6 | YF2116431JT | Carbon | 430 ohms 1/10W |
| R7 | YW2116242JT | Carbon | 2.4K ohms 1/10W |
| R8 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R9 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R10 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R11 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R12 | YW2116182JT | Carbon | 1.8K ohms 1/10W |
| R13 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R14 | YF2116473GT | Carbon | 47K ohms 1/10W |
| R15 | YF2116823JT | Carbon | 82K ohms 1/10W |
| R16 | YF2116561JT | Carbon | 560 ohms 1/10W |
| R17,18 | YF2116221JT | Carbon | 220 ohms 1/10W |
| R19 | YW2116182JT | Carbon | 1.8K ohms 1/10W |
| R20,21 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R22 | ERJ6GEYJ562 | Carbon | 5.6K ohms 1/10W |
| R23 | YF2116302GT | Carbon | 3K ohms 1/10W |
| R24 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R25 | YF2116152JT | Carbon | 1.5K ohms 1/10W |
| R26,27 | YF2116101JT | Carbon | 100 ohms 1/10W |
| R28 | ERDS2TJ301 | Carbon | 300 ohms 1/4W |
| R29,30 | YF2116272JT | Carbon | 2.7K ohms 1/10W |
| R31,32 | YF21162R2JT | Carbon | 2.2 ohms 1/10W |
| R33 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R34 | ERDS2TJ750 | Carbon | 75 ohms 1/4W |
| R35 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R36 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R37 | YWR1220P393D | Metal | 39K ohms |
| R38 | R1220P133D | Metal | 13K ohms |
| R39 | YWR1220P153D | Metal | 15K ohms |
| R40 | YWR1220P473D | Metal | 47K ohms |
| R43 | YF2116272JT | Carbon | 2.7K ohms 1/10W |
| R44 | YF2116684JT | Carbon | 680K ohms 1/10W |
| R45-48 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R49,50 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R51 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R52 | ERJ6GEYJ562 | Carbon | 5.6K ohms 1/10W |
| R53 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R54 | YF2116224JT | Carbon | 220K ohms 1/10W |
| R55 | YWR1220P362D | Metal | 3.6K ohms |
| R56 | YFR1220P104D | Metal | 100K ohms |
| R57 | YWR1220P223D | Metal | 22K ohms |
| R58 | ERJ6GEYJ562 | Carbon | 5.6K ohms 1/10W |
| R59 | YF2116220JT | Carbon | 22 ohms 1/10W |
| R60 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R61 | YW2116182JT | Carbon | 1.8K ohms 1/10W |
| R62 | YF2116331JT | Carbon | 330 ohms 1/10W |
| R63 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R64 | YWR1220P393D | Metal | 39K ohms |
| R65 | YWR1220P183D | Metal | 18K ohms |
| R66 | YWR1220P153D | Metal | 15K ohms |
| R67 | YWR1220P473D | Metal | 47K ohms |
| R68 | YF2116153JT | Carbon | 15K ohms 1/10W |
| R69,70 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R71 | YF2116752JT | Carbon | 7.5K ohms 1/10W |
| R72 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R73,74 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R75,76 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R77 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R78 | YF2116821GT | Carbon | 820 ohms 1/10W |
| R79 | YF2116122JT | Carbon | 1.2K ohms 1/10W |
| R80 | YF2116471JT | Carbon | 470 ohms 1/10W |
| R81 | YF2116750JT | Carbon | 75 ohms 1/10W |
| R82 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R83,84 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R85 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R86 | YF2116471JT | Carbon | 470 ohms 1/10W |
| R87 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R88,89 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R90,91 | YF2116683GT | Carbon | 68K ohms 1/10W |
| R92 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R93 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R94-97 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R98,99 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R100 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R101 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R102 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R103 | YF2116272JT | Carbon | 2.7K ohms 1/10W |
| R104,105 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R106 | ERJ6GEYJ472 | Carbon | 4.7K ohms 1/16W |
| R107 | YF2116332JT | Carbon | 3.3K ohms 1/10W |
| R108 | ERJ6GEYJ562 | Carbon | 5.6K ohms 1/10W |
| R109,110 | YF2116222GT | Carbon | 2.2K ohms 1/10W |
| R111,112 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R113 | YF2116682JT | Carbon | 6.8K ohms 1/10W |
| R114 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R191 | YF2116122JT | Carbon | 1.2K ohms 1/10W |
| VR1 | EVML3GA00B23 | Variable Resistor | 2K ohms |
| VR2 | EVML3GA00B13 | Variable Resistor | 1K ohms |
| VR3 | EVML3GA00B23 | Variable Resistor | 2K ohms |
| VR4 | EVML3GA00B14 | Variable Resistor | 10K ohms |
| VR5,6 | EVML3GA00B13 | Variable Resistor | 1K ohms |
| VR7,8 | EVML3GA00B24 | Variable Resistor | 20K ohms |
| VR9 | EVML3GA00B54 | Variable Resistor | 50K ohms |
| VR10,11 | EVML3GA00B24 | Variable Resistor | 20K ohms |
| C1 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C2 | ECEA1AKS470 | Electrolytic | 47 μF 10V |
| C3 | YF400180CHJT | Ceramic | 18 pF |
| C4,5 | ECEA1AKS470 | Electrolytic | 47 μF 10V |
| C6 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C7 | ECSF1CE476 | Tantalum | 47 μF 16V |
| C8 | YWRJ410V471M | Electrolytic | 470 μF 10V |
| C9 | ECEA1AKN470 | Electrolytic | 47μF 10V |
| C10 | ECSF1CE476 | Tantalum | 47 μF 16V |
| C11 | ECSF1EE476 | Tantalum | 47 μF 25V |
| C12 | YWRJ410V222M | Electrolytic | 2200 μF 10V |
| C13 | ECSF1CE476 | Tantalum | 47 μF 16V |
| C14 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C15 | ECEA0JKA220 | Electrolytic | 22 μF 6.3V |
| C16,17 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C18 | ECSF1AE476 | Tantalum | 47 μF 10V |
| C19 | YF400102XKT | Ceramic | 1000 pF |
| C20 | YF400104FZT | Ceramic | 0.1 μF |
| C21 | YF400224FZT | Ceramic | 0.22 μF |
| C22 | YF400104FZT | Ceramic | 0.1 μF |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C24 | ECEA1AKA220 | Electrolytic | 22 μF 10V |
| C25 | YF400102XKT | Ceramic | 1000 pF |
| C26 | ECEA0JKA221 | Electrolytic | 220 μF 6.3V |
| C27 | YF400103XKT | Ceramic | 0.01 μF |
| C28 | YF400102XKT | Ceramic | 1000 pF |
| C29 | ECSF1VE105 | Tantalum | 1 μF 35V |
| C30,31 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C32 | YF400223XKT | Ceramic | 0.022 μF |
| C33 | ECEA1AKS470 | Electrolytic | 47 μF 10V |
| C34 | YF400104FZT | Ceramic | 0.1 μF |
| C35,36 | YW400560UJJT | Ceramic | 56 pF |
| C37 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C38 | ECEA0JKA220 | Electrolytic | 22 μF 6.3V |
| C39 | ECEA1AKG101 | Electrolytic | 100μF 10V |
| C40 | ECEA0JKN470 | Electrolytic | 47 μF 6.3V |
| C41 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C42 | ECQB1H103JF | Plastic | 0.01 μF 50V |
| C43 | ECSF1AE476 | Tantalum | 47 μF 10V |
| C44 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C45 | ECSF1CE476 | Tantalum | 47 μF 16V |
| C46 | ECEA1AKS470 | Electrolytic | 47 μF 10V |
| C47 | ECEA1AKN470 | Electrolytic | 47 μF 10V |
| C48 | ECEA0JKA221 | Electrolytic | 220 μF 6.3V |
| C49 | YF400103XKT | Ceramic | 0.01 μF |
| C50 | YW400080CHD | Ceramic | 8 pF |
| C51 | YF400121CHJT | Ceramic | 120 pF |
| C52 | YW400090CHDT | Ceramic | 9 pF |
| C53,54 | YF400121CHJT | Ceramic | 120 pF |
| C55 | YW400080CHD | Ceramic | 8 pF |
| C56 | YF400121CHJT | Ceramic | 120 pF |
| C57 | YW400090CHDT | Ceramic | 9 pF |
| C58,59 | YF400121CHJT | Ceramic | 120 pF |
| C60 | YF400103XKT | Ceramic | 0.01 μF |
| C61 | ECEA1AKG101 | Electrolytic | 100 μF 10V |
| C62,63 | ECQB1H103JF | Plastic | 0.01 μF 50V |
| C64 | ECSF1AE476 | Tantalum | 47 μF 10V |
| C65 | ECQP1102GZ | Plastic | 1000 pF 100V |
| C66 | ECSF1AE476 | Tantalum | 47 μF 10V |
| C67,68 | ECQB1H103JF | Plastic | 0.01 μF 50V |
| C69 | YF400121CHJT | Ceramic | 120 pF |
| C70 | YW400090CHDT | Ceramic | 9 pF |
| C71 | YF400121CHJT | Ceramic | 120 pF |
| C72 | YW400080CHD | Ceramic | 8 pF |
| C73 | YF400121CHJT | Ceramic | 120 pF |
| C74 | YF400103XKT | Ceramic | 0.01 μF |
| C75 | ECSF0JE476 | Tantalum | 47 Fμ 6.3V |
| C76 | ECEA1CKN100 | Electrolytic | 10 μF 16V |
| L4 | ELJFA150KF | Coil | 15 μH |
| L5 | EL05SI390K | Coil | 39 μH |
| L6 | ELJFA270KF | Coil | 27 μH |
| L13 | EIL7EN010Q | Coil | |
| L14 | EIL7EN011Q | Coil | |
| L15 | EIL7EN012Q | Coil | |
| L16 | EIL7EN010Q | Coil | |
| L17 | EIL7EN011Q | Coil | |

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| L18,19 | EIL7EN012Q | Coil | |
| L20 | EIL7EN011Q | Coil | |
| L21 | EIL7EN010Q | Coil | |
| X1 | YWM2D17M734 | Crystal Oscillator | |
| CF1 | YWT5V8MLPF | Filter | |
| CF2,3 | YWT5V0R5MLPF | Filter | |
| CN1 | FCN215Q050GA | Connector | |
| J1,4 | ERJ6GEY0R00 | Carbon | 0 ohms 1/10W |
| J6 | ERJ6GEY0R00 | Carbon | 0 ohms 1/10W |
| TP1-10 | YW32BM5A | Test-Pin | |
| M41 | YWV2HA0979A2 | Shield Case | |
| M42 | YWV2HB0977A3 | Shield Cover | |

## POWER BOARD

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB9 (RTL) | YWVKZPS70P1A | Printed Circuit Board Assy | |
| IC1 | YW78L05UATE2 | IC | |
| IC2 | YWTC7SU04F | IC | |
| IC3 | YWTC7S04F | IC | |
| IC4 | YWTC4S66FR | IC | |
| IC5 | TL062CPS | IC | |
| Q3,4 | 2SD814-QRS | Transistor | |
| Q5,6 | 2SB792A-RS | Transistor | |
| Q7 | 2SD814-QRS | Transistor | |
| Q8 | 2SJ122 | Transistor | |
| D1 | MA1062-M | Diode | |
| D2 | MA151K | Diode | |
| D3-5 | MA182 | Diode | |
| D6 | YWERC9102 | Diode | |
| D7-9 | MA182 | Diode | |
| D10 | YFRD22EB2 | Diode | |
| D11 | MA1051-M | Diode | |
| D12 | MA1056H | Diode | |
| D13 | MA182 | Diode | |
| D14 | YWRD27EB4 | Diode | |
| D15,16 | YFRD22EB2 | Diode | |
| D17,18 | V03G | Diode | |
| R1 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R2 | ERG2CJ223 | Metal | 22K ohms 2W |
| R4 | YW2116182JT | Carbon | 1.8K ohms 1/10W |
| R5,6 | ERDS1TJ301 | Carbon | 300 ohms 1/2W |
| R8 | ERJ6GEYJ102 | Carbon | 1K ohms 1/10W |
| R9 | ERF2AK1R0 | Wire Wound | 2 ohms 2W |
| R10 | ER050CKF5602 | Metal | 56K ohms 1/2W |
| R11 | YW2116182JT | Carbon | 1.8K ohms 1/10W |
| R12 | ERDS1TJ303 | Carbon | 30K ohms 1W |
| R13 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R14 | YF2116302GT | Carbon | 3K ohms 1/10W |
| R15 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R16 | ERDS1TJ270 | Carbon | 27 ohms 1W |
| R17 | YF2116474JT | Carbon | 470K ohms 1/10W |
| R18 | YF2116272JT | Carbon | 2.7K ohms 1/10W |
| R19,20 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R21 | ERDS2TJ562 | Carbon | 5.6K ohms 1/4W |
| R22 | YF2116823JT | Carbon | 82K ohms 1/10W |
| R23 | YF2116391JT | Carbon | 390 ohms 1/10W |
| R24 | ERG2CJ223 | Metal | 22K ohms 2W |
| R25 | ERDS2TJ243 | Carbon | 24K ohms 1/4W |
| R26,29 | ERDS1TJ473 | Carbon | 47K ohms 1/2W |
| R30 | ERDS2TJ683 | Carbon | 68K ohms 1/4W |
| R31 | ERDS2TJ103 | Carbon | 10K ohms 1/4W |
| R32 | YF2116684JT | Carbon | 680K ohms 1/10W |
| R34 | ERDS2TJ102 | Carbon | 1K ohms 1/4W |
| R35 | YF2116391JT | Carbon | 390 ohms 1/10W |
| R36 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R37 | ERF2AKR68 | Wire Wound | 0.68 ohms 2W |
| R39,40 | ERJ6GEYJ103 | Carbon | 10K ohms 1/10W |
| R41 | ERJ6GEYJ223 | Carbon | 22K ohms 1/10W |
| R42 | YF2116124GT | Carbon | 120K ohms 1/1QW |
| R43 | YF2116134GT | Carbon | 130K ohms 1/10W |
| VR1 | EVML3GA00B24 | Variable Resistor | 20K ohms |
| C1,2 | YWLPH2C471S1 | Electrolytic | 470 µF 100V |
| C3 | ECQM2104KZ | Plastic | 0.1 µF |
| C5 | YWRJ3160V220 | Electrolytic | 22 µF 16V |
| C7 | YWRJ310V102M | Electrolytic | 1000 µF 10V |
| C8 | YWRJ3160V101 | Electrolytic | 100 µF 16V |
| C10 | ECQM1103KZ | Plastic | 0.01 µF 100V |
| C11,12 | YF400200CHJT | Ceramic | 20 pF |
| C13 | YF400104FZT | Ceramic | 0.1 µF |
| C14 | ECQM1104KZ | Plastic | 0.1 µF 100V |
| C15 | YWRJ316V100M | Electrolytic | 10 µF 16V |
| C16 | YF400223XKT | Ceramic | 0.022 µF |
| C17 | YWRJ3160V220 | Electrolytic | 22 µF 16V |
| C18 | YWRJ363V100M | Electrolytic | 10 µF 63V |
| C19 | YWRJ325V100M | Electrolytic | 10 µF 25V |
| C20 | YF400103XKT | Ceramic | 0.01 µF |
| C21 | YWRJ3160V101 | Electrolytic | 100 µF 16V |
| C22,23 | YWRJ316V101M | Electrolytic | 100 µF 16V |
| L1,2 | ELC18E005 | Coil | 160 µH |
| L3 | YWS100522272 | Coil | 2.7 µH |
| X1 | YWSC16MHZ | Crystal Oscillator | 16 MH2 |
| CN1 | YW530140410 | 4-pin Connector | |
| CN2 | YW530140310 | 3-pin Connector | |
| CN3 | YW53014-0210 | 2-pin Connector | |
| CN4 | YW530140310 | 3-pin Connector | |
| J38 | ERDS2TC0 | Jumper Resistor | |
| TP1,2 | YW32BM7R5 | Test- Pin | |

## POWER SUPPLY BOARD

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| PCB10 (RTL) | YWSVBP50SX-B | Printed Circuit Board Assy |
| IC1 | YWEH-12A | IC |
| IC2 | AN1431T | IC |
| Q1 | 2SK1386 | FET |
| PC1,2 | YWPS25011 | Photo Coupler |
| D1 | YWD3SBA60 | Diode |
| D4 | YWERB38-05 | Diode |
| D5,6 | YWUF4005 | Diode |
| D7 | MA645 | Diode |
| D9 | YWRD15EB3 | Diode |
| R1 | YW5D-13 | Thermistor |
| R2 | ERG1SJ823 | Metal 82K ohms 1W |
| R3 | ERX3SJ7R5 | Metal 7.5 ohms 3W |
| R4 | ERG1ANJ471 | Metal 470 ohms 1W |
| R6 | YWRNF1S102J | Fuse Resistor 1K ohms 1W |
| R7 | YWRNF1S220J | Fuse Resistor 22 ohms 1W |
| R8 | ERG1SJ683 | Metal 68K ohms 1W |
| R9 | ERX2SJR22 | Metal 0.22 ohms 2W |
| R10 | ERQ12AJ101P | Fuse Resistor 100 ohms |
| R17 | ER0S2CKF3002 | Metal 30K ohms 2W |
| R18 | ER0S2CKF6491 | Metal 6.49K ohms 2W |
| R19 | ERD25FJ223 | Carbon 22K ohms 1/4W |
| R21 | ERD25FJ201 | Carbon 200 ohms 1/4W |
| R22 | ERD25FJ182 | Carbon 1.8K ohms 1/4W |
| R23 | ERD25FJ361 | Carbon 360 ohms 1/4W |
| R24 | ERD25FJ333 | Carbon 33K ohms 1/4W |
| VR1 | EVM31GA00B53 | Variable Resistor 5K ohms |
| C1 | ECQ112A104MN | Film 0.1 μF |
| C2,3 | ECKDNS222ME | Ceramic 2200 pF |
| C4 | ECKD3D221KBN | Ceramic 220 pF |
| C5 | ECQE2104KF | Film 0.1 μF |
| C6 | ECQ112A333MN | Film 0.033 μF |
| C7-9 | ECQE6103KZ | Film 0.01 μF |
| C10 | YWDEP473K | Film 0.047 μF |
| C11 | ECQV1H105JZ | Film 1 μF 50V |
| C13 | YWDEP103K-F | Film 0.01 μF |
| C16 | YWDTN2G102K | Film 1000 pF |
| C17-19 | ECEA1EFS471 | Electrolytic 470 μF 25V |
| C20 | EC0S2DG331WL | Electrolytic 330 μF |
| C21 | ECEA1VGE470 | Electrolytic 47 μF 35V |
| C22 | ECQV1H104JZ | Film 0.1 μF |
| T1 | YWSVBT12SD | Transformer |
| L1 | LFEE221R8A5 | Line Filter |
| L2 | HK10S1R037TV | Choke Coil |
| F1 | YWGHS3 | Fuse |
| E1 | YWM110CW5PUL | 5-pin Terminal |
| E2 | YWMC11-5P | Terminal Cover |
| E3 | YWSB2569A | Fuse Holder |
| M42 | YWMSVBALCA02 | Upper Caser |
| M43 | YWMSVBALCA01 | Bottom Case |
| M44 | YWZSVBIS01 | Insulator Cover |
| M45 | YWTC45ACPT03 | Rubber |
| M46 | YWMVTBFELA1 | Mounting Angle |
| M47 | YWZNPSVB12SD | Decoration Label |
| M48 | YWMSVCUBW1 | Bar A |
| M49 | YWMSVCUBW2 | Bar B |

## ACCESSORY PARTS/PACKAGING PARTS

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| CN103 | YFCNR-1204J | Socket |
| CN104 | YFCNR-1204P | Socket |
| E101 | YWPS550C2836 | Cable |
| M51 | YWV8QA3249AN | Operating Instructions |
| M52 | XZB26X40C05 | Polyethylene Bag |
| M53 | XZB35X50C05 | Polyethylene Bag |
| M55 | YWV9CA2204AN | Packaging Assy |
| M56 | YWV8FA0140A4 | Packaging Label |
| M57 | YWV8FA0203A4 | Packaging Label |